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## September 2018 School of Graduate Studies Newsletter

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# SCHOOL OF GRADUATE STUDIES **NEWSLETTER**

EMBRY-RIDDLE AERONAUTICAL UNIVERSITY | COLLEGE OF AVIATION



## SEPTEMBER 2018

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# NOTES FROM THE ASSOCIATE DEAN

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## REACHING THE FINISH LINE.

I was recently asked the meaning of my favorite expression: “Stay on Target!” That phrase reminds me to consciously clear the path to success. Some of us set targets for personal performance, such as improving lap times at the pool, checking in with extended family every weekend, reading a new book every month, or putting a certain part of our paycheck into retirement savings every year. For SGS students, the expression refers to focusing energy and rallying resources to complete your degree.

When potential students speak with me about our programs, I ask them, “What are your offsets going to be?” That question usually raises eyebrows.

Pursuing a graduate degree requires 10 to 40 hours of personal commitment each week, depending on how aggressively you are charging toward completion. If you haven’t thought about where to find those hours, you are in for a very bumpy ride.

Staying on target means building time into your life to hit the books. No, you can’t have it all. You can’t be employed, have a healthy family life, go out with friends, pursue hobbies, and excel in graduate school. Something has to give! The truth is, good students make a to-do list, but the best students make a stop-list. Guess which one is harder? Items on the stop-list are the offsets required for success.

Staying on target also means rallying resources to support your studies. That may entail creating a robust financial plan, recruiting accountability partners, or finding a special place where you will have no distractions when you do your most serious work, such as studying for exams or hammering out your thesis or dissertation. I used to schedule “dissertation Saturdays,” which were 12-hour marathon sessions at this one study table in the library at the University of New Mexico. I know another professor in our college who completed his dissertation by using ropes to tie himself to a chair in order to focus on manuscript



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**Dr. Antonio I. Cortés**

*Associate Dean*

writing for hours at a time! I’m not kidding. It also means crafting a system of rewards to celebrate your milestones and victories as you progress through the program. A reward could be asking someone special out to dinner, taking a mini-vacation, or devouring your favorite ice cream.

Graduate programs are long. Although some students can whip through a master’s degree in 18 months and a doctorate in 4 years, most of us are loaded down with other commitments that slow our progress. Also, it is common to face challenges that are out of our control. During your trek through the program, the size of your family may increase or decrease, friendships may shift, you may change jobs and even move, and income could decrease. A student who plans on everything going smoothly during a degree program is like a pilot assuming that every flight will encounter beautiful weather, perfectly functioning airspace, and a healthy jet; thus not factoring in fuel for holding, diversions to alternates, or lower cruising altitudes. Now that would be downright silly!

Define your offsets. Align your resources. Expect contingencies. We’ll see you at the finish line.

***Stay on target!***

# SGS HIRING

## ADJUNCT FACULTY - GRADUATE COURSES IN THE MASTER OF SCIENCE IN AERONAUTICS DEGREE (180420) DAYTONA BEACH

### Description

Embry-Riddle Aeronautical University is currently hiring adjunct faculty for graduate courses in the Master of Science in Aeronautics Degree (College of Aviation School of Graduate Studies) at the Daytona Beach campus. This is an excellent opportunity to help shape the next generation of rising leaders in the aeronautics industry while remaining current in your discipline and forming part of a dynamic team of scholars. We have 100 graduate students from all parts of the world and are searching for a few part-time (adjunct) instructors to teach face-to-face (traditional classroom) courses on our Daytona Beach Campus in a wide variety of topics that are all related to aeronautics. Adjunct instructors are invited to all functions in the School of Graduate Studies, such as faculty meetings and retreats.

The position requires only teaching with no expectation of service duties, research, or other scholarly activity; although opportunities exist to participate in faculty research projects if so desired. Adjunct faculty may be invited to teach one to two courses per semester (January through May and August through December). Courses may be taught during business hours or during evening hours, subject to instructor and student availability. The candidate must possess effective oral and written communications skills. The ideal candidate will have established a record of, or be able to successfully demonstrate, teaching excellence. The campus has a Center for Teaching and Learning Excellence to assist new and experienced instructors in the science and art of creating learning.

Please read about the course you are applying for, prior to submitting your application.

Graduate course catalog: <https://catalog.erau.edu/daytona-beach/graduate-courses/>

All applications will be reviewed toward current course openings.



We are currently hiring adjunct instructors to teach the following specialization areas of the Master of Science in Aeronautics degree program: Space Studies, Unmanned Aerospace Systems, Aviation Safety Systems, Aviation Operations, and Research Methods and Statistics.

Current courses are listed below:

- **MSA 601 – Applications in Space: Commerce, Defense, and Exploration**
- **MSA 511 – Earth Observation and Remote Sensing**
- **MSA 512 – Space Mission and Launch Operations**
- **MSA 513 – Space Habitation and Life Support Systems**
- **MSA 533 – Unmanned Aerospace Systems**
- **MSA 531 – Robotics and Control**
- **MSA 637 – Unmanned Aerospace Systems Operations and Payloads**
- **MSA 638 – Human Factors in Unmanned Aerospace Systems**
- **MSA 611 – Aviation/Aerospace System Safety**
- **MSA 621 – Aviation/Aerospace Safety Program Management**
- **MSA 515 – Aviation/Aerospace Simulation Systems**
- **MSA 516 – Applications in Crew Resource Management**
- **MSA 619 – Airport Safety and Certification**
- **MSA 620 – Air Carrier Operations**
- **MSA 622 – Corporate Aviation Operations**
- **MSA 662 – Statistical Analysis for Aviation/Aerospace**
- **MSA 670 – Research Methods for Aviation/Aerospace**

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# SGS HIRING *CONTINUED*

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## Qualifications

Candidates must possess the following qualifications:

- Doctoral degree (such as PhD, EdD, DPH, DBA, PsyD) in or closely related to the discipline to be taught.
- Or, a doctoral degree in any field plus verifiable professional experience in the subject discipline.

Applicants must complete all questions on the application prior to their submission being reviewed.

\*\*Once hired, adjunct instructors are contracted to teach course-by-course and term-by-term. There is no guarantee that a course contract will be offered; it is dependent on the needs of the university. If an instructor has not been offered a course contract and/or has not taught within 2 years, they will automatically be moved to an inactive status in our system and will be required to reapply if they desire to gain active status again\*\*

**Primary Location: United States-Florida-Daytona Beach**

**Job: Adjunct**

**Education Level: Doctorate Degree**

**Employee Status: Adjunct**

**Schedule: Part-time**

**Shift: Day**

**Travel: No**

**Job Posting: Aug 31, 2018**

Please use the link to access the career page: <https://embryriddle.taleo.net/careersection/002/jobdetail.ftl?job=180420&tz=GMT-04%3A00>

**Education Level: Master's Degree**



# MSA THESIS DEFENSE

## Ada Cheng

On August 9th, Ada Cheng gave her thesis defense. Runway Incursion is the leading cause of serious incidents or accidents in airports. One of the most common causes of runway incursion is airport unfamiliarity. Therefore, the researcher designed an electronically interactive application as a practice tool for pilots to utilize during flight preparation. The objective of this application is to enhance airport familiarity, ultimately reducing runway incursion. This application is interactive, affordable, accessible, and mobile device-based. It was designed using the Systems Engineering approach, following Human Factors Engineering principles to make this application user-friendly and to provide optimized human machine interaction. A model-based Systems Engineering software-CORE was utilized to manage the system requirements and provide clear traceability and rationality for each function. A prototype of the interface was developed and evaluated using heuristic evaluation approach. The experts who participated in the evaluation generally agreed that this application would provide enhanced learning experience of airport environment during flight preparation rather than studying the FAA airport diagram alone. This project provides a guideline for a Software Engineer to program this application expeditiously with the least confusion.

Her committee had a rigorous discussion after her defense and brought us good news that she passed! SGS is very proud of your achievements, and we congratulate you with your success! We believe that this is a very meaningful advance in aviation, giving the direction in prevention of runway incursion.



# DISSERTATION DEFENSES

**Robert (Bob) W. Maxson, Ph.D.** successfully defended his dissertation on Thursday, August 16, 2018, on the Daytona Beach Campus. The dissertation title was “Prediction of airport arrival rates using data mining methods.” The committee was chaired by Dr. Dothang Truong, Professor for the School of Graduate studies. His research sought to establish and utilize relationships between environmental variable inputs and airport efficiency estimates by data mining archived weather and airport performance data at ten geographically and climatologically different airports.

**Arun P. Saini, Ph.D.** successfully defended his dissertation on Thursday, August 23, 2018, on the Daytona Beach Campus. The dissertation title was “Evaluation of airline efficiency and environmental impacts using data envelopment analysis.” The committee was chaired by Dr. Dothang Truong, Professor for the School of Graduate studies. His research constructed a linear programming model utilizing the data envelopment analysis methodology to assess the relative efficiencies of thirteen airlines.

**Troy E. Techau, Ph.D.** successfully defended his dissertation on Thursday, August 29, 2018, on the Daytona Beach Campus. The dissertation title was “General aviation pilot acceptance and adoption of electronic flight bag technology.” The committee was chaired by Dr. Steven Hampton, Professor for the School of Graduate studies. His research used an adapted version of the extended Unified Theory of Acceptance and Use of Technology (UTAUT2) to examine electronic flight bag (EFB) acceptance and adoption for general aviation (GA) pilots.

*Congratulations, Bob, Arun, and Troy! We are so proud of your accomplishments.*





# STUDENT OPPORTUNITY

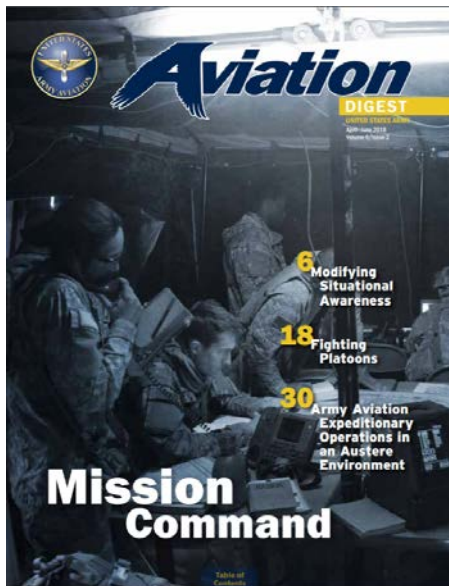
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## A NEAT OPPORTUNITY FOR STUDENT PROFESSIONAL DEVELOPMENT

By Dr. Antonio Cortés

We are always searching for ways to develop our students. Our school was recently presented with an opportunity that I think you will find very interesting. It entails promoting aviation safety in the U.S. Army.

### U.S. ARMY OPPORTUNITY



This is a way for students and alumni to develop their public writing skills. Public writing, much like public speaking, is different from scholarly writing. Our school was recently contacted by the U.S. Army's Aviation Safety Branch, which publishes a professional bulletin called Aviation Digest, which has over 100,000 digital subscribers. The digest is read throughout the Army's Combat Aviation Brigades, major aviation commands, Program Management offices, and by the Centers of Excellence division commanders, brigade combat teams, and goes to all professional Army libraries. Articles are usually between 1,500 and 3,500 words long, but longer articles will be considered. Articles are particularly requested on the following hot topics: near-peer threats, the 2017 version of FM 3-0, and leadership; although op-ed pieces and any topic that is aviation-related will be considered. The themes for the upcoming issues are: Aviation Training Strategy (15 November 2018 article deadline), Lethality Strategy (15 February 2019 deadline), Recon and Security Ops (15 May 2018 deadline), and the Future of Aviation (15 August 2019 deadline).

Anyone wanting more information should contact the editor directly: Ms. Amy Barrett, at [amy.l.barrett6.ctr@mail.mil](mailto:amy.l.barrett6.ctr@mail.mil).

You can download a free version of Aviation Digest here: [http://www.rucker.army.mil/aviationdigest/assets/archive/AVN\\_DIG\\_2018\\_04-06.pdf](http://www.rucker.army.mil/aviationdigest/assets/archive/AVN_DIG_2018_04-06.pdf)

# SGS ANNOUNCEMENTS

## OUR STUDENTS, STAFF, FACULTY, AND ALUMNI



**Dr. Antonio Cortés, Dr. Mark Friend, Dr. Dothang Truong, Dr. Carolina Anderson, Prof. Ed Coleman (Prescott Campus), Mr. Jeremy Mammen, Mr. MacKenzie Dickson, and Mr. Brad Baugh**

Under the guidance of Dr. Antonio Cortés, SGS kicked off a new task assigned in February 2018 by the Dean of the COA. The task is to create and validate a single quantitative indicator of flight safety performance for the DB-COA flight department, to be calculated on a periodic basis. The purpose of the task was to increase the accuracy of the Risk Management and Safety Assurance components on the Flight Department SMS. The project titled “Development of a Safety Performance Algorithm (SPA) for the Flight Department” is fully underway.

### Dr. Andrew Dattel

The students had the chance to interview the captain of the ship, the passengers, and the dealers about situation awareness. The opportunity to engage in research and apply techniques for collecting situation awareness data were the highlights of the class outing. During down time, students even had the opportunity to try their luck (some were luckier than the others). Dr. Dattel teaches the situation awareness class during the summer session. Dr. Dattel coordinates these class project outings every time he teaches the class. For example, last year the students collected data at a Tortugas game, and the year before, students collected data from customers and cast members at Epcot. Students enjoy these class outings and report that it is a great way to apply what they learn in a dynamic setting.



*Pictured: Students from Dr. Dattel’s Situation Awareness and Performance in Aviation/Aerospace class about to board Victory Casino Cruise for a class project.*

### Stephanie Fussell and Marisa Aguiar

Two of our residential Ph.D. students, Stephanie Fussell and Marisa Aguiar attended and presented their research work at the Institute of Industrial & Systems Engineers Annual Conference. It took place between May 19-22 in Orlando, Florida.



Stephanie’s topic was “A Futuristic Flight Training Model Leveraging AR/VR,” in which she discussed the use of the current technologies in flight training and proposed a flight training program that used augmented and virtual realities to accompany traditional flight training devices.

Marisa’s topic was “Development of a Skill Taxonomy” in which she, with Dr. Cuevas, conducted a cognitive task analysis utilizing interviews and observations with subject matter experts within the context of a virtual reality part task trainer for airborne refueling. The findings were used to validate and refine a preliminary taxonomy for defining the construct skill.

# SGS

## ANNOUNCEMENTS *CONTINUED*

### OUR STUDENTS, STAFF, FACULTY, AND ALUMNI

#### Dr. Haydee M. Cuevas

During my fellowship, I supported the Human-Machine Teaming program, directed by Lt. Col. Chad Tossell at the Warfighter Effectiveness Research Center (WERC), USAF Academy Department of Behavioral Sciences, in Colorado Springs, CO, and the Review and Synthesis of Human-Machine Teaming Research program, directed by Dr. Greg Funke at AFRL-Airman Systems, Wright-Patterson Air Force Base (WPAFB), in Dayton, OH. Both programs aimed to explore the issues and challenges associated with optimizing human-machine teaming (HMT) in the U.S. Air Force. I also participated in three Red Team sessions where WERC researchers presented information on eight Cadet Capstone Projects. The objective of the Red Team sessions was to solicit suggestions for improvement for each capstone study's experimental design.

My fellowship offered numerous opportunities to meet with WERC faculty and researchers to discuss areas of common interest and pursue future collaborations. In particular, we plan to host a site visit to Embry-Riddle by Dr. Nathan Tenhundfeld, post-doctoral researcher at the WERC, and Dr. Ewart de Visser, the technical advisor for the WERC, and some USAF Academy cadets. The goal of the site visit is to showcase Embry-Riddle's research capabilities and arrange meetings with key faculty to establish mutually beneficial partnerships. I also met with Dr. Michael Coovert and his graduate student Frances Kim from the University of South Florida to discuss our common and unique research interests and identify opportunities for future research.

A personally rewarding activity during the fellowship was having the opportunity to provide mentorship to students. Nick Fitzgerald, an undergraduate student from Colorado State University, was completing a summer internship at the WERC. We met frequently to discuss his research interests, educational plans, and career goals. Similarly, I met frequently with John Brooks, an MSA student from Embry-Riddle, who joined me during the fellowship. We discussed his plans after graduation and explored how the fellowship could help him achieve his career goals. I was especially delighted to get together with two of our PhD in Aviation students, Matt Grunenwald and Dave Hedges.

In sum, I am very satisfied with my experiences during the AFRL Summer Faculty Fellowship at the USAF Academy. The fellowship broadened my knowledge of HMT research as well as provided valuable opportunities to establish meaningful professional relationships with colleagues conducting cutting edge research in HMT. I would highly recommend this program.



# SGS ANNOUNCEMENTS *CONTINUED*

## OUR STUDENTS, STAFF, FACULTY, AND ALUMNI



### Woo Jin Choi

One of our residential Ph.D. students, Woo Jin Choi received an opportunity to present his research study on “What can we learn from 30 years of airport privatization around the world? A study on the multicultural environment of airport management.”

This session draws on a study of airport privatization successes and failures around the world and the multi-layered conflicts that arise when combining different national, organization, and professional cultures. How can an understanding of the different cultures of government and private sector operators be built into a privatization framework and governance structure, to help accomplish the objectives of all stakeholders, ensure efficient cooperation and drive business performance? This multicultural challenge of airport management was presented at the Global Airport Development Americas 2018 that took place in Denver, Colorado, between June 13-15, 2018.

Indeed, throughout the conference, I could feel the strong needs and motivation for promoting private sector participation in major capacity expansion and rehabilitation programs of major U.S. airports while most of the airport authorities seem too concerned about potential objection from airlines and labor unions. Rather than the financial feasibility of the transactions, how to achieve big consensus among airport stakeholders from disparate cultures would be a key success factor to materialize the FAA’s plan for the airport privatization.

I received another opportunity to present my other research paper at Air Transport Research Society 2018 World Conference, Seoul, Korea. My research topic “Scenario-Based Strategic Planning for Future Civil Vertical Take-off and Landing Transport” focused on critical challenges and uncertainties, driving forces in terms of politics, economics, sociology, and technology, and strategic implementation plan. This year’s ATRS conference was organized as the largest-scale program ever, presenting 341 papers and was attended by more than 950 participants from 54 countries. I found ERAU faculty and Ph.D. students contributed a lot to successful achievement of the conference, with 15 attendees and 14 presented papers. Also, during the travel I endeavored to conduct meaningful discussions with key aviation stakeholders in Korea to develop my potential dissertation topic. I also delivered a five-day lecture on the Airport Strategy and Business Management at Incheon Airport Aviation Academy.



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## ANNOUNCEMENTS *CONTINUED*

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### OUR STUDENTS, STAFF, FACULTY, AND ALUMNI

#### Madhur Bharat Gupta

Tears from families getting together or separating from each other, tears of joy from parents while receiving their children in uniform, sadness of families carrying remains of their loved ones. Airports are all together a different world. It is not just a place of to and from travel, rather it's a place where emotions circulate. One of our MSA students, Madhur Bharat Gupta received an opportunity to pursue his summer internship at Tampa International Airport.

My internship at Tampa International Airport was a great opportunity to an amazing introduction to the airport world and particularly airport operations. I had previous experience in aviation software, but I had never worked in operations or safety.

The future developments, great infrastructure, and vast opportunities at the airport provided me an exposure to all the activities that take place within the airport. Most of my duties revolved around airport operations. I was treated more like an employee than an intern. I performed duties similar to an airport Operations Specialist. I was handed over a work plan guide that covered every department in the airport. I spent anywhere from a couple of hours to a whole day with each department. I overshadowed their work and answered all the questions mentioned in the work book guide. This guide was really helpful and guided me in understanding various airport operations.

As part of my duties, I inspected airfields, terminals, and airside. I also assisted passengers and answered their queries. I reported discrepancies and followed up on the action. I worked on several projects, and they improved my knowledge about the aviation industry. I went on a couple of tours such as a general aviation airports tour, ground transportation tour, concessionaries tour, and airlines operations tour.

I volunteered at The Florida Airport Council Conference. I was fortunate enough for this opportunity as I met many delegates. I was able to interact with them, and they happily shared their experiences. I attended a few committee meetings and various sessions. Discussions on present scenario and future planning kept everyone on their toes and up to date.

I was fortunate enough to interact with the CEO of the airport, Mr. Joe Lopano, as he shared his journey and gave some words of wisdom. I was glad to see that employees were very passionate about sharing their knowledge and experience with me. I was always encouraged to ask questions, and my supervisor made sure that I was part of every meeting so as to expand my horizons.

It was a great learning experience as my career goal revolves around operations and safety. This was a great opportunity for me to understand my capabilities and interests for my future growth. I learned about my personality and professional skills in this fast-paced working environment. I found that the knowledge I gained in my curriculum was in sync with this internship program. I will be able to relate and improve my thought processes in future courses. This internship has expanded my area of interests in the career building process as well. My safety and operations classes were fruitful during this internship.





# SGS ANNOUNCEMENTS *CONTINUED*

## OUR STUDENTS, STAFF, FACULTY, AND ALUMNI

### Steven Singleton

One of our MSA students, Steven Singleton received an opportunity to pursue his summer internship at the National Transportation Safety Board.

My summer internship at the National Transportation Safety Board (NTSB) came as a surprise to me as I was still unclear of my summer plans at the time. Anthony Brickhouse, a Professor in the Department of Applied Aviation Sciences and Faculty Advisor to the student chapter of International Society of Air Safety Investigators (ISASI), forwarded the job posting from USAJOBS.GOV. I applied and waited patiently, and eventually was rewarded with an offer to join the team at the Office of Aviation Safety. Two months later, my exciting adventure in Washington D.C. would begin.



Embry-Riddle Aeronautical University is well represented at the NTSB. There were three other Riddle students, including myself, so I felt at home with familiar faces. I was joined by Lauren Herzog, an undergraduate from the Aerospace and Occupational Safety program, and Maryam Gracias, a recent graduate of the Commercial Space Operations program. The NTSB welcomed us, took our official picture, and gave us everything we needed to assimilate well into the agency when we arrived in May.

I was assigned to the Major Investigations team within the Aviation Safety Department, located at the headquarters in downtown Washington D.C. This department at NTSB investigates all reportable accidents from United States flag carrier airlines as well as U.S. based aircraft and engine manufacturers that happen outside the United States. Most of the reportable accidents that are received in these remarkably safe days of air travel are accidents that result in a “substantial” injury to a passenger or crew member, which according to federal regulations, include fractures and significant hospitalizations. I was given the task to handle the completion of these reports to their destination in the NTSB’s public website for public viewing. It gave me a great insight to how the NTSB can follow its congressional mandate to find a probable cause to all civil air accidents in the U.S. and issue safety recommendations. It also gave me a chance to work with some great NTSB investigators in the Aviation Safety Department and meet and learn about other transportation modes which includes highway, pipeline, railroad, and marine.

I was given the additional detail of working with the regional general aviation accident investigators at the Ashburn, VA, office on two small aircraft accidents. The ability to go on the scene and use some of the investigative techniques learned at Embry-Riddle was an awesome experience which will pay dividends for my future in the field of aviation safety. I learned a lot from the seasoned investigators from those two investigations, and my skills learned in a course from my Master of Science in Aeronautics (MSA 604- Human Factors in the Aviation/ Aerospace Industry), taught by Dr. Cortés, allowed me to process through some possible reasons these pilots made the decisions that led to the accident.

Overall, this summer internship was an amazing opportunity to learn, grow, and put the knowledge learned at Embry-Riddle to use in the field, and it all culminated in receiving and accepting an offer to join Virgin Galactic’s Safety Department in Mojave, CA, this fall. It was a very productive summer indeed.

# SGS ANNOUNCEMENTS *CONTINUED*

## OUR STUDENTS, STAFF, FACULTY, AND ALUMNI



### **Jasleen Kaur**

The impressions of a good education are never lost. They bear fruit in due course. This is what I find most appealing in my life. Becoming an astronaut has always been a dream of mine. It is my strong belief that a master's degree at Embry Riddle Aeronautical University is indispensable for acquiring a deep understanding and insight into the aviation field. One of our MSA students, Jasleen Kaur received an opportunity to go on a study abroad program.

Working with Dr. Dattel on my thesis, "Behavioral research study on people willing to go to Mars" had given me an opportunity to go on a study aboard program to collect data. This summer I received an opportunity to visit various places like Poland, Germany, Sweden, and Greece. As a part of thesis study, I am collecting data on isolation conditions from various habitats around the world. With the help of this data, I am trying to understand various psychological and physiological factors that Astronauts encounter in space, such as isolation, confinement, mood patterns, sleep disturbance, etc. Understanding these factors will help to improve isolation conditions. Mars missions might be prolonged, so we must make sure that astronauts will not suffer from isolation problems.

In Poland, I stayed in isolation for 2 weeks in a habitat named LUNARES, along with my teammates, where we performed various

isolation-related experiments and EVA's to have an isolation type of experience as astronauts have in space. Interactions with my theoretical and technical expertise of the faculty and the environment in the LUNARES has added new depth to my vision about isolation.

In Germany, I was invited by International Space Education Institute in Leipzig to conduct an awareness seminar to spread the awareness about space studies through various rover related activities and was awarded with a lifetime Jesco Von Puttkamer membership award.

In Sweden, I conducted the seminar in Malmo University on Mars Awareness Program (MAP-2030), the awareness program I started as a self-initiative almost 3 years ago to spread the awareness about space education around the globe.

The magical changes in the world of Aerospace intensely fascinate and prompt me to choose space operations as my future field of study. Having a specialization in Aerospace Operations, I wanted to expand my border from Aerospace to Space level, so I opted for the Spacesuits & Human Spaceflight Operations class in Greece. In Greece, every day traveling to the new destination, exploring classrooms in nature without walls, without buildings, meeting people from different culture and places was itself a great experience. My alacrity and zeal are not confined to the academic curriculum. In the Spacesuits & Human Spaceflight Operations course, we got an opportunity to scuba dive a couple of times to learn how astronauts manage to perform spacewalk without gravity. As an adventure lover, I always took the opportunity to explore the beauty of nature whenever it presented itself in my way. We sailed to 5 different islands and hiked Mt. Olympus.

I believe understanding this quest needs considerable persistence and an infinite capacity to learn. My objective is to put forward a diligent endeavor and conquer the heights of the chosen field of master's studies by contributing to the research that has been already commenced in exploring the depths of this highly challenging field.

# SGS

## ANNOUNCEMENTS *CONTINUED*

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### PUBLICATIONS

The COA and the COAS collaboration on various projects shares another success. The article on “Research on the human side of autonomous driving” was published at the Transport Policy. It will be included in an Elsevier Special Collection on the Human Side of Autonomous Driving. The article discusses the positive and negative media portrayals and consumer perceptions of driverless vehicles based on media reports. The study was conducted under the guidance of Dr. Scott Winter and Dr. Stephen Rice. Students Emily Anania, Nathan Walters, Matthew Pierce, and Mattie Milner were part of this project. Please use this link to read the article in its entirety: <https://news.erau.edu/news-briefs/research-explores-the-human-side-of-autonomous-driving/>

In conjunction with the General Aviation Joint Steering Committee (GAJSC) in Washington, D.C., a team from the School of Graduate Studies (SGS) was commissioned during the Spring 2018 semester to develop a measure of a general aviation pilot’s personal safety culture. The primary COA student researchers were Mr. Bradley S. Baugh (SGS, Ph.D.), Ms. Kimberly M. Bracewell (SGS, MSA), and Ms. Urara Takano (A.S., B.S.). Using an inter-college collaborative team of COA and COAS researchers, an initial safety culture instrument was created, validated, and presented to the GAJSC during their April 2018 meeting in Washington, D.C. This study is one example of how the university can leverage their expertise in research to help meet industry needs. The project also involved student researchers from the undergraduate through doctoral levels to highlight the broad spectrum of skills and talents of our students. A portion of this work was presented at the 2018 National Aircraft Training Symposium by the lead student researcher, Mr. Bradley Baugh (SGS, Ph.D.). An \* denotes a student author:

\*Baugh, B.S., \*Bracewell, K. M., \*Takano, U., \*Milner, M. N., \*Anania, E. C., \*Ragbir, N. K., \*Gupta, M. B., \*Garcia, D. M., \*Valecha, D. O., \*Marte, D. A., Winter, S. R., & Rice, S. (2018, August). Personal safety culture: A new measure for general aviation pilots. Presentation at the 2018 National Training Aircraft Symposium, Daytona Beach, Florida.

# SGS ANNOUNCEMENTS *CONTINUED*

## **NEXTGEN TEST BED TOUR** By Mohamed Rostom

On August 24, 2018, Dr. Antonio Cortés, Associate Dean for the School of Graduate Studies, led 11 of our COA team members to the NEXTGEN Test-Bed facility adjacent to the Daytona Beach Airport. Mr. Chris Kokai, the Director of Operations for Florida NextGen Test Bed, Embry-Riddle Aeronautical University, was our tour guide inside the facility for about two hours.

Mr. Kokai started his presentation with a historical review about the foundation of Florida NEXTGEN Test-Bed. It is a 10,000 sq. ft. facility exclusively managed by Embry-Riddle and funded by the FAA. It consists of a two story building; the first floor houses the Embry-Riddle staff, while the second floor is devoted to the FAA.

Florida NEXTGEN Test-Bed is a combination of three different groups: the first is the FAA which represents the rules and regulations, and the second is Embry-Riddle which represents the university research and studies, and the third group consists of many well-known companies in the field of aviation such as Honeywell, General Electric, Lockheed Martin et al. which represents the aviation industry leaders and competitors who are responsible for the manufacturing and designing of this innovative system.

For about 10 years, these three groups were all working hard together to provide the United States and the world with the State-of-the-Art ATM Technology called NEXTGEN to enhance the Air Traffic Control System by less traveling time and cost, less gas emission, less oral communication between pilots and controllers by using the CPDLC technology, enhancing safety, more integrity, and more efficiency. At this point, it is important to mention that Embry-Riddle has been archiving and saving data for Air traffic and weather information science since 1998. This data is available at the NEXTGEN facility.

Also, the systems inside the facility have the ability to simulate gate to gate flights between any two airports around the world. Added to that, NEXTGEN is connected to the System Wide Information Management (SWIM) which is a database network for a worldwide aviation specialist and trusted users such as pilots, controllers, and dispatchers who are able to share and exchange the latest aeronautical information and data such as airports status and weather information around the world to increase the situation awareness.

The tour was very exciting and fruitful, which encouraged Dr. Cortés to ask Mr. Kokai about any chances or availability of any internships for our graduate students in the COA and also any fellowships for our faculty members to use the NEXTGEN database in their research studies. It is with great pleasure that I announce the excellent news that Mr. Kokai has approved this request. SGS students and faculty will be able to participate in internships and conduct research at Florida NEXTGEN Test Bed in the near future. This will allow for some alternative data collection for thesis work as well as dissertations.



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