THE ALUMNI MAGAZINE OF EMBRY-RIDDLE AERONAUTICAL UNIVERSITY
FALL 2019

Lift

TERMINAL REINVENTION

We take a look inside the airports of the future, as depots become destinations

PAGE 12

FROM THE PRESIDENT

In the fight for revenue, airports and airlines have promised us a more convenient, customized passenger experience. Major airports are using digital and automation technologies to expedite baggage handling, and they are improving wayfinding with digital displays and directions delivered to your smartphone.

Increasingly, airports will use Wi-Fi access points to identify optimal locations for concessions, vending machines and retailers.

There are also infrastructure efficiencies in the works that are not so apparent to travelers.

According to International Airport Transport Association (IATA) projections, the United States will spend between $1.2 trillion and $1.5 trillion on global airport infrastructure by 2030. This investment will help the industry meet demand and improve operations and safety.

Just as data analytics and connectivity are transforming the efficiency of aircraft and airspace management, airports are becoming more internet-enabled, functioning as self-contained cities. This requires tremendous collaboration between disciplines that were once separate specialties.

Our College of Engineering is preparing civil engineers to become "internet-enabled designers" who will go beyond traditional master plans to contribute to digital master plans that integrate air traffic, security monitoring, closed-circuit TV, private land mobile radio and public Wi-Fi.

Their work will encompass using the cloud and collaboration tools, sensors and processors that will improve airside ground operations: cargo, baggage, fuel, catering and de-icing.

New designs will apply green materials and energy-efficient options that create — or re-create — airports with minimal environmental impact and maximum sustainability. To minimize cost and risk, our engineers will work with new simulation and software tools to visualize and evaluate infrastructure design and assess key performance factors.

As a university that is focused on aviation from the top down and the ground up, we tap the expertise in all of our colleges — Aviation, Arts & Sciences, Business, Engineering, and Security & Intelligence — to give our students multidisciplinary insight and collaborative opportunities that prepare them to integrate solutions in an increasingly connected industry.

Our alumni likewise lead the technology curve. Many of you are the change agents who are directing the digital transformation of aviation/aerospace, as we know (or knew) it. Your successes create nodes of connectivity for our students to follow.

Sincerely,

P. Barry Butler, Ph.D.
President
Embry-Riddle Aeronautical University

Lift

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CLOCKWISE FROM BOTTOM LEFT: COURTESY OF VICTORIA BRITTAIN; MARK LIPCZYNSKI; ARUNAS KACINSKAS; DARYL LABELLO; AND DAVID MASSEY AND DARYL LABELLO

12 Terminal Reinvention

Airport managers are transforming their facilities to emphasize the passenger experience. But can they keep up with demand?

CHECK OUT THE *LIFT* WEBSITE!
Read *Lift* on your desktop, tablet or phone, and get immediate access to video and other web extras.
lift.erau.edu

ON THE COVER: Illustration by Arunas Kacinskas

NEWS & NOTES
FROM THE WORLD
OF EMBRY-RIDDLE

CHATTER

ALTIMETER: HIGH POINTS AT EMBRY-RIDDLE

Embry-Riddle's **Unmanned Aircraft Systems program** won first place and its **Gaetz Aerospace Institute** won third place in the Training & Education Organization category at the 2019 Association for Unmanned Vehicles Systems International XCELLENCE Awards.

The Prescott Campus **Golden Eagles Flight Team** finished third overall at the National Intercollegiate Flying Association's SAFECON competition, while the Daytona Beach Campus **Eagles Flight Team** finished seventh overall.

Senior Director of Athletics Development **Matt Wilson** received the 2019 Rising Star Award from the National Association of Athletic Development Directors.

Student-athlete **Jordan Bramblett ('19)** won the 2019 NAIA Track & Field National Championship for the marathon event with a time of 2:33:43.33.

Embry-Riddle Professor **Alan Liu** received a $670,000 National Science Foundation grant to install a special radar instrument at the Andes LIDAR Observatory in Cerro Pachón, Chile.

Embry-Riddle **Air Force ROTC Honor Guard and drill teams** placed first in all competition categories and won the Southern California Invitational Drill Meet (SCIDM) Senior Championship award at the 54th annual SCIDM.

The six undergraduate students who participated in the 2019 Aerospace Maintenance Competition won first place in the School Division.

AMS Champs

Eagles ace global aerospace maintenance competition

An Aviation Maintenance Science (AMS) team from Embry-Riddle claimed first place in an international competition, overtaking challengers from 27 other schools by more swiftly and accurately completing 30 timed tasks.

Six undergraduate students participated in the 2019 Aerospace Maintenance Competition, organized by the Aerospace Maintenance Council and presented by Snap-on Industrial, April 9-11, 2019, in Atlanta, Georgia.

"Thanks to the exemplary training Embry-Riddle provides to its students, we can see the future of aviation maintenance is in good hands," says Bart Wignall, president of Snap-on Industrial, in an award letter to the team.

"We are proud of our students for their technical performance, as well as their sportsmanship," says Embry-Riddle President P. Barry Butler. "They exemplified the Eagle spirit, demonstrating the highest standards of aviation safety and responsibility."

In addition to winning the No. 1 ranking in the competition's School Division, two students on the Embry-Riddle team won individual awards. Ben Henriquez won an AMC Professionalism Award and Immanuel Bankole secured a Future Maintenance Professional Award, a scholarship provided by PistonPower and the trade association PAMA.

The other winning AMS team members were Tristan Anderson, Christopher Lambert and Chris Culver. Greg Algarin served in a critical backup role.

> **"We are proud of our students for their technical performance, as well as their sportsmanship. They exemplified the Eagle spirit."**
> **— P. BARRY BUTLER, PRESIDENT**

"It was an outstanding learning experience for our students," says Chris Piccone ('11, '18), laboratory instructional specialist, who managed and coached the team, along with Earl Sault Jr. ('98), AMS training and supply specialist. "This year, they were exposed to advanced, modern tools and top-of-the-line diagnostic equipment."

The 2018 Boeing *Pilot & Technician Outlook* estimates a worldwide need for 754,000 new aviation maintenance technicians over the next 20 years. Exhibitions such as the Aerospace Maintenance Competition help raise awareness of the importance of aviation maintenance technicians, Piccone says.

Embry-Riddle's participation in the competition would not have been possible without generous travel support from Airbus, as well as advance practice time at JetBlue's training facilities. "We are very grateful for their support," Piccone says.

— Ginger Pinholster

COURTESY OF SNAP-ON INDUSTRIAL

New Chancellor Named

Accomplished scholar Anette M. Karlsson to lead Prescott Campus

Anette M. Karlsson, Ph.D., a mechanical and aerospace engineer and a highly accomplished academic leader, is the newest chancellor for Embry-Riddle's campus in Prescott, Arizona, effective Aug. 1.

Karlsson most recently served as a professor and dean of the Washkewicz College of Engineering at Cleveland State University, since 2012. Earlier in her career, she worked as a research/design engineer for Saab Missiles and Saab Aerospace, and as a technical attaché of material science for Sweden's Embassy in the United States.

She succeeds Frank Ayers ('87), who after a decade of leading the Prescott Campus has returned to Daytona Beach, Florida, to be a professor for the College of Aviation.

"Dr. Karlsson brings stellar academic credentials, superb executive experience, a passion for both engineering and aviation and a team-oriented approach to her new position as chancellor," says Embry-Riddle President P. Barry Butler. "I have complete confidence in her ability to lead our Prescott Campus. I was impressed by her vision, her humility and her proven commitment to faculty, students and staff."

A fellow of the American Society of Mechanical Engineering, Karlsson earned her Ph.D. in mechanical and aerospace engineering at Rutgers University, within the area of applied mechanics. She has published more than 80 peer-reviewed international journal articles; and is the recipient of the U.S. Office of Naval Research Young Investigator Award, the University of Delaware's E.A. Trabant Award for Women's Equity and the Young Scholars Award of the Francis Alison Society, among others.

— Ginger Pinholster

EAGLE WORDSMITH
Airports + Aviation

Put your knowledge to the test with our digital crossword puzzle, created by Faculty Emeritus Alexander Wells.
lift.erau.edu/word-fall19

Three Trustees Join Embry-Riddle Board

Marathon runner, astronaut-scientist and alumnus are among the new recruits

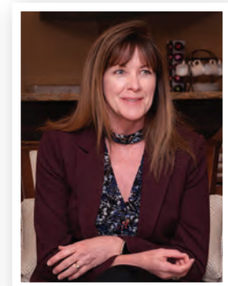
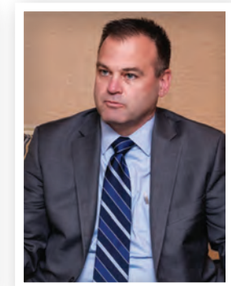
The Embry-Riddle Board of Trustees confirmed three new members in March to help provide sound governance and strategic direction for the university.

The new trustees are Janet Kavandi, Ph.D., scientist and NASA astronaut; Neal J. Keating, chair, president and CEO of Kaman Corporation; and Steve Nordlund ('90), vice president and general manager of Boeing NeXt.

Janet Kavandi has logged 33 days in space and 535 low-Earth orbits. While at the Johnson Space Center, she served as a mission specialist on three space shuttle missions and as NASA's deputy chief of the astronaut office, director of flight crew operations and deputy director of health and human performance.

Since 2016, she has directed the NASA Glenn Research Center in Cleveland, Ohio.

Neal J. Keating is a longtime aerospace executive. Before joining Kaman Corporation in 2007, he was chief operating officer at Hughes Supply, a $5.4 billion industrial distributor, and CEO at GKN Aerospace, a $1 billion aerospace subsidiary of GKN, Plc.




From left: Neal J. Keating, Janet Kavandi and Steve Nordlund.

In addition to his professional activities, Keating competes in triathlons and marathons. He is a three-time finisher of the Boston Marathon.

Steve Nordlund ('90) leads the Boeing NeXt mission to define the future of urban, regional and global mobility. This includes oversight of the development of next-generation platforms, cargo and passenger air vehicles and passenger-carrying hypersonic aircraft.

Prior to his service with Boeing, Nordlund worked for Insitu and IBM. And, from 1990-98, he served as chief information officer at Embry-Riddle. An alumnus, Nordlund earned a B.S. in Aeronautical Studies, with an emphasis in Aviation Management.

To learn more about all three of the new trustees, visit **lift.erau.edu/3trustees**.

TOP: CONNOR MCSHANE; BOTTOM: DARYL LABELLO

COMMENTS AND OPINIONS
FROM EMBRY-RIDDLE
ALUMNI AND FRIENDS

FEEDBACK

Moderator Marc Bernier leads the spring *Lift*, Off the Page discussion with panelists, from left, Edward Onwe, Sherry J. Ortiz, Damon J. D'Agostino and Stephen M. Powell.

FROM THE EDITOR

The annual *Lift*, Off the Page event brought four alumni business leaders to campus in April. This interactive business roundtable addressed the challenges, trends and emerging opportunities in aviation business (and beyond). If you missed it, check out the video at **alumni.erau.edu/lifttalks-2019**.

This edition of *Lift* features the growth and transformation of U.S. airports and several alumni who are leading these efforts. Yet another sign of the booming commercial aviation industry, we got this story idea from a fellow Eagle. See his letter/suggestion (this page). Do you have a story to tell? Is there an interesting topic *Lift* should explore? Tell us about it. Email **liftmag@erau.edu**. — SARA WITHROW, EDITOR

Doolittle Hall

'Good Smells'

I love your magazine and the photo with the musical setups on that stage [spring 2019: *Tailwinds*] — I want to know more about it! I love old photos from ERAU like this. I loved the student center — the cafeteria — the movie nights! I was at Embry-Riddle from 1993-1998 (five years), and the first two were on campus at Doolittle. It's weird, but I miss the smells (good smells) and had a lot of friends there — so a lot of memories. Doolittle and Lehman (another smell — that downstairs computer lab!) are the only buildings there that I remember — that are still standing. I was back once in 2003. There was a storm when I was there, but I still caught up with everyone — old professors and mail center employees/friends. I hope to make it back again for homecoming.

Michael Diraimondo ('98)
B.S. Aerospace Engineering

'Diversity Is an Issue in Aviation'

As a former National Transportation Safety Board Chief of Staff to the chairman and having had the pleasure of working with member and past chairman of the NTSB Chris Hart and now retired NTSB managing director Dennis Jones ('80), I wholeheartedly agree with your response to the state of our industry as it relates to race [spring 2019: *Feedback*]. However, I do not believe it's just a black or white issue but a diversity issue as a whole.

As an ERAU graduate, I have spent well over 20 years in the aviation industry, and the issue of race in the aviation industry has been close and personal. We should all start thinking of ways we can address this issue with the industry to bring about positive change for future generations.

At AERTRON Inc., we help clients think of ways to foster diversity and innovation through an inclusive, collaborative environment that welcomes diverse points of view and provides transparency within the aviation and transportation industry.

Vishal Amin ('01)
B.S. Aeronautical Science

Airport Expansions in *Lift*

Is it possible to cover airport expansions in the ERAU alumni magazine? BNA, LAX and LGA all have massive airport expansion plans, which boost commercial real estate and economic development in many cities throughout the world.

Andrew Corum ('07)
B.S. Professional Aeronautics

Editor's Note: Check out the story in this issue. Thanks, Andrew, for the suggestion.

TALK TO US

We invite your feedback on *Lift* content or topics related to the university. Letters may be edited for style, length and clarity. Submission does not guarantee publication.

EMAIL: liftmag@erau.edu

TOP: JASMINE JOHNSON; BOTTOM: EMBRY-RIDDLE ARCHIVES

A Different Life Path

Moving on from Vietnam

BY TOM ISENBURG ('70)

Above: Tom Isenburg and his wife, Linda, who passed away in 2017. Below: Tom at the Daytona Beach Campus in 1968.

I joined Embry-Riddle Aeronautical Institute in January 1967 as an aviation science management student. I had officially entered Marine Corps Active Reserve status after my tours in Vietnam. I fully expected to be called back up.

That never happened.

I always wanted to fly and build airplanes, and the Embry-Riddle faculty and staff provided the support I needed as a student – while also respecting me as a combat veteran.

Classes were held in the administration building, a two-story wooden structure near the airport terminal. In late 1968, our classes were moved to the first of many quadrant-like buildings where we used to fly our model airplanes – just in time to celebrate the school's accreditation as a "special purpose" university.

I married my best friend in September 1968. Linda was an emergency room nurse at Halifax Hospital in Daytona Beach, Florida. She would find time to travel with me to the north gate of Cape Canaveral, near Eddy Creek, to watch the Apollo launches; the most meaningful of which was the launch of Apollo 11 in July 1969. Those were the days when you could drive your car onto the Cape and park at the Mission Control and Vehicle Assembly buildings.

I got a job as a student aide to Dr. Jose Lopez. Occasionally we and Dr. Hortensia Ballina would talk about how they had to emigrate from Cuba to escape the Fidel Castro communist regime. My platoon was able to help the North Vietnamese flee to South Vietnam, to locations that provided emigration transport to Australia. We shared stories about how people can make a go at a life in a new country. They made me feel important – and made sure I did my homework.

Another faculty role model was Roger Campbell, who didn't tolerate wrong answers or lack of interest, but who quietly worked with those of us who had trouble keeping up in class. A tough but fair educator, he asked us to detail our "jobs" while in service to our country. He would use those experiences to explain the concepts of science and aero engineering.

In the fall of 1968, I was asked to participate in a debate regarding the U.S. commitment to the Vietnam War. It was hosted by nearby Bethune-Cookman College. Military veterans of both schools were on the debate teams. I admired the educators from both schools for their courage to discuss a topic that was sparking protests and riots in 1968. Veterans from both schools agreed that our time in Vietnam was in the past. It was time to move forward into our chosen life paths.

Our 1970 commencement was marked by a number of classmates joining the military, while we veterans tried on civilian suits and ties. The high point for me was when then-President Jack Hunt presented Linda with a Ph.T.: a degree in "Puttin' Hubby Through." The award recognized "that he probably never would have made it without the unselfish cooperation and assistance of his wife."

I agree. My pilot's certificate and my B.S. in Aviation Management would not have been possible if Linda hadn't kept me on track.

Embry-Riddle provided a happy isolation that allowed me to enjoy and learn. It took me away from the craziness surrounding the Vietnam War, and it fed my passion for aviation and space astronautics.

Thanks to my time with very smart students and a committed faculty and staff, I was able to heal from my wartime experience and to find a different life path.

I went on to enjoy a 45-year career standing up and sustaining companies, and designing and building aircraft missile radar warning systems, internet routers, servers and even medical instrumentation products worldwide.

Thank you, Eagles.

EDITOR'S NOTE: *Isenburg documents his Vietnam experience in his book,* Letters Home 2nd Platoon, Echo (2011). *He is the principal owner of Ironmount. His wife of 48 years, Linda, passed away in 2017.*

SEND US YOUR STORY *In Other Words* gives you the opportunity to share your industry-related or personal perspective with *Lift* readers. Email submissions/proposals to **liftmag@erau.edu**.

Frederick J. Brittain was a flight instructor for Embry-Riddle in the 1940s, which included a stint teaching French Navy pilots in Homestead, Florida.

A Pilot's Life

Photos and personal documents tell a colorful story of No. 5 BFTS flight instructor Frederick Brittain

BY ALAN MARCOS PINTO CESAR

Inside a yellowing envelope from Riddle-McKay Aero College is a typewritten page — a form, really — that matter-of-factly certifies the flight time of Frederick J. Brittain ('43). He accumulated 2,428 hours piloting PT-17 Stearmans and AT-6 Texans at the No. 5 British Flying Training School (BFTS).

The certificate hints at a rich story: "Mr. Brittain has never been involved in an aircraft accident at Riddle Field. He has flown more hours in Riddle Field aircraft than any other pilot at Riddle Field," noted an apparently impressed R.V. Walker, the operations and engineering officer at the school in Clewiston, Florida.

A Living Archive

Victoria Brittain, Frederick's daughter, unloaded six boxes of that story in May 2019 at the Embry-Riddle archives in Daytona Beach, Florida. The photos, personal letters and flight logs recording nearly 30,000 hours document her late father's life and career in the skies.

"It's very uncommon that someone has that much material, and it's that well organized," says Archivist Kevin Montgomery. "Especially when it's all about one particular person. That always adds color to the Embry-Riddle story."

Frederick, who descended from a family of actors and scenic artists, specialized in color.

On the back cover of his first flight log are cryptic diary entries — dated one-liners under the heading, "Things I think of." They mark his first glider flights — which became a lifelong passion — a Christmas Day road trip to perform snap rolls, and one on New Year's Day 1942, less than a month after the attack on Pearl Harbor: "A new year, a new WAR. What can you use a pilot for?"

Exactly one year later, Frederick had completed a refresher course at Riddle Field and on Jan. 3, 1943, he started instructing British cadets for the Royal Air Force (RAF). Operated by the Riddle-McKay Aero College, one of six divisions of then-Riddle Aeronautical Institute, No. 5 BFTS trained 1,800 RAF cadets from 1941 to 1945.

Frederick's acumen as an instructor and his personality earned him lasting friendships. Victoria's collection is dotted with letters and Christmas cards from her father's former British trainees, most of whom were bomber pilots.

"It rather shook me flying over the English country side for the first time," Sgt. C.L. Norman wrote in July 1944. "I was glad that I paid attention to the navigation while I was at Riddle Field. It doesn't do very much good here, to fly the 'iron compass' (railways)."

Norman continued: "I must thank you again for the great trouble you took to get me 'on the ball.' I did so much enjoy my training with you, I only wish I could come over to Florida, [and] go through advanced again. All of us here long to get hold of an AT again, [and] do some real flying in decent weather, but I think we have all seen the last of the good old Texan."

COURTESY OF VICTORIA BRITTAIN

"He pinned my wings on me. When I went to work at NASA at Cape Canaveral, I joined the aero club at Patrick Air Force Base. I made him join as an instructor so I could have, in my view, the best instructor." — VICTORIA BRITTAIN

Did You Know?

- Embry-Riddle trained French President Gen. Charles de Gaulle's son, Philippe, to fly in 1945-46. Philippe later became an admiral and inspector general of the French Navy. He retired in 1982.

French Connection

When World War II ended, Riddle Field closed. In search of revenue, the Embry-Riddle Company in Miami picked up a contract to provide basic and advanced flight training to French Navy pilots in Homestead, Florida. Frederick flew to Homestead to train the Frenchmen. He then moved on to piloting flying boats for commercial airlines: Skyways International and British Guiana Airways.

Frederick returned to Miami in 1950 to follow John Paul Riddle in his new business, Riddle Airlines. "Mr. John Paul Riddle was president during the early years and was a wonderful friend," he wrote in a retrospective résumé.

Air Ways

Frederick was a captain at Riddle Airlines for 28 years, through the company's name change to Airlift International (1963) and its acquisition of Slick Airways (1966). During that time, he fathered Victoria and her sister, Jacqueline. The family would often fly to meet him to spend time together between routes, Victoria says.

But his downtime away from work was often spent in the sky. "When he wasn't flying, he was flying," Victoria says. "Mainly gliders. We took one trip — there was some soaring contest — and he soared all the way to Las Vegas. My mother [Alicia] took us in the car and we followed him all the way out, and wherever he landed was where we stayed."

Frederick's love of flight was passed down to his younger daughter. "He pinned my wings on me," Victoria says, who got her glider and private pilot certificates from her dad. "When I went to work at NASA at Cape Canaveral, I joined the aero club at Patrick Air Force Base. I made him join as an instructor so I could have, in my view, the best instructor."

Though Frederick didn't have a formal education past high school and flight training, Victoria — a military aviator herself — once described him as, "the most proficient and educated aviator and engineer that I know. He is an aviation artist. ... When he teaches, he imparts this artistry on the students."

But for all her admiration, Victoria does surpass her father — just. "I did get one on him," she says with a smile and a chuckle, revealing a fact that she ribbed her dad about. "I got rotary wing."

EDITOR'S NOTE: *Frederick passed away in 2002. Victoria has preserved her father's memory at* ***frederickjbrittain.com****. She plans to donate this collection to the Embry-Riddle Archives.*

Frederick J. Brittain, pictured left, passed on his love of flying to his daughter, Victoria Brittain, below, who plans to donate his photos, personal letters and flight logs documenting 30,000 hours in the skies to the Embry-Riddle Archives.

BOTTOM LEFT: DARYL LABELLO; TOP AND RIGHT: COURTESY OF VICTORIA BRITTAIN

Building Bridges

Nazia Taylor translates differences into understanding through workplace program

BY MELANIE STAWICKI AZAM

Nazia Taylor served as president of the Employee Business Resource Group: Bridges for six years, during which time membership grew from eight to more than 300.

MARK LIPCZYNSKI

Growing up in the South Pacific island nation of Fiji, Nazia Taylor ('13) was used to interacting with people from different backgrounds. Fiji is a melting pot of cultures and religions, she says. When she moved to the United States at age 15, she noticed it was different.

"It was a huge culture change," says Taylor, who earned an M.S. in Management with an emphasis in Aviation/Aerospace Industrial Management from Embry-Riddle.

Taylor's unique perspective and background have contributed to her success as a senior project manager at American Airlines in Tempe, Arizona, and fueled her passion for bringing diverse people together. That passion took root when she volunteered to lead the Employee Business Resource Group: Bridges.

Founded to "bridge" the gaps among the airline's culturally diverse workforce, the Bridges' membership grew from eight to more than 300 during Taylor's six-year tenure as president. It even drew the attention of CEO Doug Parker, who attended its multicultural events.

"Bridges was a platform where I felt I could really make a difference," Taylor says. It was an opportunity to change people's attitudes from "just tolerating individuals to understanding and accepting them," she explains.

Diversity in Action

A third-generation Fijian, Taylor grew up attending a Muslim school. Her great-grandparents were indentured laborers from India, before immigrating to the former British colony.

However, she says, "I did not experience discrimination until I came to the U.S. I embraced diversity, because that is how I was raised."

Her high school in California was diverse, but students tended to stick with people of similar backgrounds and ethnicities. Taylor says she disliked the cliques and refused to limit her friendships with people based on religion, race or ethnicity.

After earning a bachelor's degree in liberal arts, Taylor worked in banking. When she moved to Arizona, she got an entry-level job at US Airways. It was then that she discovered she "loved" aviation.

At US Airways, which merged with American Airlines in 2013, Taylor attended a meeting hosted by Bridges, which started as a multi-faith group that focused mostly on Islam. Tapped to be president in 2009, she decided to revamp the group and expand its scope.

"One of the most important principles Nazia and I held true to was finding ways to show that our diversity as human beings was not only acceptable, but understandable," says Tandy Wheeler, who served with Taylor as vice president and treasurer of Bridges.

Bridges' events included everything from demonstrations of Japanese calligraphy to Greek dancing.

"Helping to take the mystery out of ordinary things made it safe to then look at the more sensitive aspects of a culture or religion," Wheeler says.

Today, Bridges is one of 22 distinct Employee Business Resource Groups at American Airlines, which represent the employees and their beliefs, nationalities and backgrounds.

Path to Success

In 2010, Taylor entered graduate school at Embry-Riddle. Her courses were online, but she says she received a lot of detailed feedback and personal attention from her instructors.

"The biggest thing I learned at Embry-Riddle is you need to keep improving yourself," she says.

> **"I want to make a difference — that's what drives me."**
>
> **— NAZIA TAYLOR**

In the meantime, at US Airways, she started working for the heavy maintenance planning team. Taylor says it bothered her that she didn't know more about the mechanical side of aviation. So, she enrolled in a local program to earn her airframe and powerplant certificate.

Working a full-time job, attending graduate school online and earning her A&P certificate, all at the same time, made for a grueling schedule. But, Taylor says, "I wanted to prove to the vendors and my co-workers that I could do this. When you work in the industry, people's lives are at risk, and people need to trust you."

Family Matters

Just as she was completing her graduate degree, Taylor and her husband, Arthur, found out they were expecting twin girls. She was four months pregnant when she walked across the stage at Embry-Riddle's commencement ceremony.

Taylor's life took a new turn when her daughters were born. The twins arrived early — at just 25 weeks — both born weighing less than 2 pounds. Taylor stayed home for eight months to care for her daughters. Today, the girls, who will turn 6 this year, are thriving.

Beyond work and family, Taylor says she wants to continue to unite people through mutual understanding and education, and make a positive impact, especially in her chosen field of aviation.

She is an active member of and adviser and coach to the president of the Phoenix Chapter of Bridges. And, since 2018, she's served as president of the Indian Employee Business Resource Group.

"I want to be more involved, give back and become more engaged," Taylor says. "I want to make a difference — that's what drives me."

Drone Control

Unique technology introduces a safe way to neutralize rogue drones, even in civilian areas

BY GINGER PINHOLSTER

By 2022, the Federal Aviation Administration (FAA) expects some 1.1 million small, hobbyist-type unmanned aircraft systems, or drones, to take to the skies — more than twice as many as in 2017.

More drones mean more incursions into sensitive airspaces, particularly in and around airports, and that's a potential threat to the safe operation of commercial airliners filled with passengers and cargo. While most drone operators undoubtedly strive to fly responsibly, some may be unaware of the rules regarding restricted airspace. A few may even have criminal intentions.

Assistant Professor Houbing Song and Ph.D. students Yongxin Liu and Jian Wang have invented a fix for the problem: a technology that detects and commandeers unauthorized drones.

"Our solution is friendly," Song says. "Rather than destroying the drone, we guide it to a safe landing place. The technology will counter unauthorized drones effectively, while ensuring low collateral damage and low cost per engagement."

Song and his students recently teamed up with international entrepreneur Sotirios George Kaminis. The son of a shipping industry leader on the Greek island of Chios, Kaminis fell in love with Embry-Riddle in the 1980s when he attended classes at the Daytona Beach Campus. "In all my travels over the years, I never forgot Embry-Riddle," says Kaminis, founder and CEO of Drone Defense Systems. "It's the most prestigious aeronautical university in the world — the perfect partner to bring new counter-drone technology to market."

PHOTO ILLUSTRATION BY DAVID MASSEY AND DARYL LABELLO

Assistant Professor Houbing Song, right, and Ph.D. student Jian Wang are part of a group that has invented a technology that detects and commandeers unauthorized drones.

> **"Rather than destroying the drone, we guide it to a safe landing place. The technology will counter unauthorized drones effectively, while ensuring low collateral damage and low cost per engagement."** — HOUBING SONG, ASSISTANT PROFESSOR

Under a newly inked licensing agreement, Embry-Riddle and Kaminis will refine the concept, build a prototype and pursue related products, according to Stephanie A. Miller, executive director of technology transfer for Embry-Riddle's Research Park.

The Drone Problem

The need for Song's invention is clear. Near-miss events between drones and aircraft have been on the rise. Last year, unauthorized drones forced a costly shutdown at England's Gatwick Airport. Reports of drone sightings from pilots, citizens and law enforcement have increased significantly over the past few years, with the FAA now receiving more than 100 such reports each month. In 2018, a separate Embry-Riddle team scanned the skies over Daytona Beach International Airport for 13 days and spotted 73 different DJI-type drones that made 192 separate flights.

Existing remedies for rogue drones range from dispatching birds of prey to shooting bullets, deploying nets or targeting them with channel-jamming electromagnetic noise. Military and corporate drone-jamming technologies do exist, Kaminis says, but the cost of those systems makes them inaccessible for smaller airports or private venues.

By comparison, Song's system could be manufactured at a far more reasonable price, Kaminis says. It would also work over long distances and in a variety of settings.

This approach offers important advantages, says Kaminis, whose company already markets another counter-drone technology. "My existing product is intrusive — it's considered a weapon because it jams drones and makes them fall out of the sky. The Embry-Riddle technology is non-intrusive, so it is ideal for civilian applications and easy to export, as it doesn't fall under ITAR (International Traffic in Arms Regulations)."

'Listening' with Artificial Intelligence

Song's proposed system leverages a network of wireless acoustic sensors to identify a flying drone. To distinguish drones from birds, he and his students built a computer-based "brain," called a neural network, that is continuously learning. After the system confirms a drone, the acoustic sensors, working in tandem with beacon receivers, transmit information to a control center.

If the drone is on an unauthorized flight, Song's system uses sophisticated pattern-recognition techniques to decipher its video-streaming channel and interrupt the broadcast with a warning message. "For each drone," says Liu, who is currently pursuing his second Ph.D., "the acoustic pattern might be a little different, but we can tell them apart, just as anyone can distinguish between a songbird and the noise of a crow."

The system can also hijack the drone's communication channel to trigger its predetermined return flight, or otherwise trick the drone into leaving the area, explains Song, who has a background in artificial intelligence and cybersecurity and is the director of the Security and Optimization for Networked Globe Laboratory (SONG Lab) in the Electrical, Computer, Software and Systems Engineering department.

"It disrupts communication between the pilot and the drone," Kaminis says. "It detects the drone, finds out what language the drone speaks, activates an emulation system that mimics the drone's language and snatches control away from the pilot."

Kaminis is optimistic about the potential for Song's invention. "When people work together and put their heads together, great things can happen," he says. "We're going to make history for Embry-Riddle."

A U.S. patent application has been filed by Embry-Riddle, Song and his students.

In the 1980s, Kaminis had to leave Embry-Riddle and return to Greece to run his family's shipping business. He plans now to complete his degree. "I look forward to picking up where I left off and reliving being an Eagle. When I do, I will join my youngest son, Angelos, a current student at the Daytona Beach Campus."

TERMINAL REINVENTION

As increases in U.S. air traffic put pressure on the nation's aging aviation infrastructure, airport managers are transforming their facilities to emphasize the passenger experience. But can they keep up with demand?

By SARA WITHROW and ALAN MARCOS PINTO CESAR
Illustrations by ARUNAS KACINSKAS

Airports aren't just airports anymore. What used to be a utilitarian jumping off and landing point for air travelers has become a mecca of experiential commerce. Today's passengers enjoy upscale dining and shopping options, conduct meetings in business-ready conference rooms, get spa treatments and even catch some zzzs in sleep pods — without ever leaving the terminal.

All of these upgrades are about much more than making travel more pleasant. They underscore a growing financial challenge. With more people and cargo flying, the nation's aging aviation infrastructure is struggling to keep up. To meet the growing demand, airport managers must expand and enhance their aeronautical operations and customer service facilities. The problem is, only one of these things — customer service — is profitable for the airport.

Enter the next wave of airport innovation. Airport managers are banking their futures on turning "depots" into destinations, where travelers can turn a time-killing layover into an experience to remember.

Open Skies, Crowded Airports

Mike Ehl ('83), director of aviation operations for Seattle-Tacoma International Airport (SEA-Tac), says there is an inescapable irony to air travel today.

People are flying in style on new, modern aircraft with in-flight entertainment and technological advancements that enhance the passenger experience, he says. However, when these same passengers embark and land, they typically walk through outdated, congested airport facilities that are more than 40 years old.

Ehl says SEA-Tac — recently named the eighth largest airport in the country — is a case in point.

"We've grown 45% in the last five years," Ehl says. "We're 70 years old. We have crossed the threshold, now, where the level of service is disappointing at best."

What's more, there is no slowdown coming. "It's all deregulated, and [any airline] can come day or night. It's pretty much open skies. … It's a real challenge nationwide, and I don't think anyone was prepared for it," he says.

The San Diego County Regional Airport expanded its Terminal 2 in 2013 and is planning to replace Terminal 1, which was built in 1967.

COURTESY OF SAN DIEGO INTERNATIONAL AIRPORT

Kim Becker ('97), president and CEO of the San Diego County Regional Airport (SAN) Authority, says SAN is also struggling to keep up with the influx of passengers. "We've had five years of record growth," she says. "Last year (2018), we hit 24 million passengers. The year before (2017), we were at 22 million. That was on top of four previous years of growth."

Becker and SAN are not alone. The Airports Council International-North America (ACI-NA) projects that by 2023, commercial airports in the United States will need more than $128 billion in infrastructure upgrades and maintenance.

Citing this figure and the most recent American Society of Civil Engineers' Infrastructure Report Card (2017) that gave U.S. airports a just-passing "D" grade, **Liying Gu** ('02), vice president for economic affairs and research at ACI-NA, says, "We really need to spend more money. We need more investment."

Vishal Amin ('01), aviation commissioner for the state of Maryland and CEO of Aertron, agrees. "If we are going to be a 21st century economy, we need to continue to invest in new infrastructure to support innovation and new technologies, such as autonomous vehicles, urban air mobility and the integration of unmanned aircraft systems."

Financing the Future

To secure investment to finance airport growth, airport managers have relatively few choices. The federal government is a key player, but investments have been flat, at best. The total grant money provided through the Airport Improvement Program (AIP) — a competitive program that supports Federal Aviation Administration-approved projects and is funded by airline and fuel taxes and other user fees — has not grown with air passenger and cargo demand.

"It's great to have $3.1 to $3.4 billion allocated to the airports, but … if you look back at AIP grants in general over the last 15 years, the allocated amount has been pretty well the same," says **Zachary Oakley** ('16), deputy director of operations and planning for the Greater Rockford Airport Authority/ Chicago Rockford International Airport (RFD).

Adjusted for inflation, this amounts to a 25% loss in buying power from 2004 to 2018, according to the Bureau of Labor Statistics.

Government has taken notice of the funding challenge. In 2019, the Department of Transportation distributed $779 million in supplemental grants to 127 airports — in addition to the $3.1 billion awarded the previous year through AIP.

The Escape Lounge at Oakland International Airport generated $300,000 in non-aeronautical revenue in 2018.

COURTESY OF OAKLAND INTERNATIONAL AIRPORT

BY THE NUMBERS

U.S. COMMERCIAL AIRPORTS

493 airports

$1.4 trillion-plus in economic output

11.5M jobs

7% U.S. GDP

1.7B passengers (arrivals and departures)

SOURCE: Airports Council International-North America

Another airport funding stream — the passenger facility charge — could help support infrastructure projects, but it's currently constrained by an Act of Congress. [See sidebar: *Finance Battleground*.]

The Customer Is King

Airports aren't waiting on a hand up from the government, though. With an increasing number of customers at the gates, many of the major hubs are renovating and expanding — placing an emphasis on how those customers experience their time between flights. It's all in an attempt to increase non-aeronautical revenue, which is one of the keys to helping finance future infrastructure improvements.

"The aeronautical side is a cost-recovery model for U.S. airports," Gu says. It includes charges collected from the airlines, cargo and general aviation activities, and fixed-base operations. The U.S. government does not allow airports to make a profit on this income. "But on the non-aeronautical side, that's where innovation comes in," she says. In addition to traditional non-aeronautical sources like parking and rental car fees, airport managers can turn to a range of experiential enhancements. "By offering more choices, more convenience, embedding technology and making the environment more appealing, the airport can generate more revenue from the food and beverage, and retail and services aspects," Gu says.

SEA-Tac is investing in its airport infrastructure to the tune of $3.2 billion, with most of this investment focusing on the customer experience. Improvements include a 201,000-square-foot addition to the North Satellite/Alaska Airlines Terminal, a new, 450,000-square-foot, multi-level International Arrivals Facility, and a 10,000-square-foot expansion of the Central Terminal. The projects add dining and shopping options, seating and aesthetic enhancements, and a new premium customer lounge for Alaska Airlines.

"The aeronautical side is a cost-recovery model for U.S. airports. But on the non-aeronautical side, that's where innovation comes in." — LIYING GU

Seattle-Tacoma International Airport is in the midst of a $3.2 billion overhaul that focuses on elevating the customer experience.

MIKE EHL

DID YOU KNOW?

✈ Embry-Riddle's David B. O'Maley College of Business hosts the annual Air Transport Research Society (ATRS) *Airport Benchmarking Report: Global Standards for Airport Excellence*. Students collect and compile the data, conduct analysis and generate the annual report under the supervision of Benchmarking Task Force Research Director Chunyan Yu, professor of air transport management. The 2019 report includes an assessment of 204 airports and 24 airport groups located in Asia Pacific, Europe and North America.

SAN is also improving its passenger spaces and adding gates: The airport opened an expanded Terminal 2 in 2013. The $820 million Leadership in Energy and Environmental Design (LEED) Platinum-certified project added 460,000 square feet of terminal space and 1.3 million square feet of new aircraft ramp and taxiways.

"The passenger experience is vastly improved in Terminal 2. Terminal 1 was built in 1967, and we are planning for its replacement," Becker says. The proposed Terminal 1 project would include 30 gates (to replace the current 19-gate facility) and cost an estimated $3 billion. The environmental study for the project is currently underway.

SAN and SEA-Tac are just the tip of the iceberg when it comes to current airport renovations. Los Angeles International Airport is in the midst of a $14 billion infrastructure improvement project; Chicago O'Hare Airport recently started an $8.7 billion expansion; and JFK in New York is planning to spend $10 billion on its remodel.

Smaller airports are also investing in passenger-oriented facilities. For example, Oakley says, RFD will complete a $25 million, three-year terminal expansion project in 2020.

In the last 15 years, RFD has gone from serving 60,000 passengers a year to roughly 240,000, Oakley says. "Our terminal was originally built for 19- to 30-seat aircraft, ground boarding, without TSA. It was definitely processing things it was never intended to process."

Innovating the Customer Experience

Customers are driving these improvements, says Assistant Professor of Aerospace and Occupational Safety **E. David Williams**. "Traveling now is more of an experience, as well as a necessity. People are demanding a higher level of service," he says.

For example, premium lounges that offer relaxed seating, complimentary snacks and beverages — and sometimes sleep pods — for a fee are becoming popular, as are lounges designated for spa services, smokers and people traveling with pets.

Airports are also installing fee-based conference rooms, so business travelers can choose to meet at the airport and avoid the added expense of rental cars and overnight accommodations, Williams says.

"The airports have become more than just an airport."

Bryant Francis ('98), director of aviation for the Port of Oakland/Oakland International Airport (OAK), agrees. "Customers today have far greater expectations of the airport experience than in years past, and we are stepping up our efforts to

FINANCE BATTLEGROUND: Airlines and Airports Face Off Over Passenger Facility Charges

Those working in the aviation industry largely agree that U.S. airports need to renovate and grow. But that's where the agreement ends. Airports and airlines have argued for the last decade or more about how best to accomplish this growth.

The root of the argument is the passenger facility charge (PFC).

Since 2001, an Act of Congress has capped the PFC at $4.50 per flight segment (for a maximum of $18 total for a round trip), per passenger. Airports use PFCs to pay off debt and as backing to issue bonds to finance improvements, says Liying Gu ('02), vice president for economic affairs and research at ACI-NA. This "artificial cap," Gu says, is interfering with airports' ability to make necessary facility improvements.

"There is a bit of a battle between airports and airlines," says Kim Becker ('97), president and CEO of the San Diego County Regional Airport Authority. The airlines maintain that airports can pay for infrastructure projects through partnership agreements with them, while airports, as good neighbors, must consider what's right for the community as well, Becker says.

According to Airlines for America (A4A), an airline advocacy group, PFCs are an "airport tax" on the traveling public and increasing the PFC could affect consumers' decisions to fly.

But Zachary Oakley ('16), deputy director of operations and planning for the Greater Rockford Airport Authority/Chicago Rockford International Airport, says, "The airlines have no problem arbitrarily raising baggage fees, seat fees or any other fees they want to tack on to the ticket price," with no regulatory oversight. Despite the growing number of ancillary fees, 777.9 million* passengers flew on domestic flights in 2018, an increase of 4.9% over 2017.

The ACI-NA is lobbying Congress to increase the PFC cap. "We're hoping that the upcoming infrastructure package or other legislative vehicles would include a provision to allow the airports to charge a higher rate," Gu says.

*U.S. Department of Transportation, Bureau of Transportation Statistics

San Diego County Regional Airport's LEED Platinum-certified terminal project added 460,000 square feet of terminal space.

COURTESY OF SAN DIEGO INTERNATIONAL AIRPORT

FROM SMART WINDOWS TO BIOMETRICS:

Technological Advancements Promise to Revolutionize the Airport Experience

Airports are not only enlarging and modernizing the physical attributes of terminals — they're also adding technological systems to streamline their customer services. Many of these improvements revolve around data collection and analysis.

Liying Gu ('02), vice president for economic affairs and research at ACI-NA, says windows with integrated beacons and sensors have been installed at some airports and others will soon follow suit. These "smart windows" are able to track customer traffic and activity. "Dallas/Fort Worth Airport is investing in these windows," Gu says. "They are trying to figure out better ways to use all of the data to better manage passenger flow."

Embry-Riddle Professor of Air Transport Management Chunyan Yu says airports are also monitoring passengers via their internet usage. "These days, airports can use social media to track passenger movement. Some are using Wi-Fi activity to determine when they need to open security lanes. If you have an airport app on your phone, it can also push location-based ads as you move through the airport," she says.

Wayfinding applications are also becoming popular at airports, allowing passengers to navigate the terminals and search for their favorite restaurants and retail outlets by using their smartphones. These apps give airports additional data on passenger congestion.

With all of this data flowing in, Gu says the data analyst is now a common employee working behind the scenes at the airport. "They need people who can digest all of this data to help them make more informed decisions," she says.

BAG TRACKING

Lost bags are not only a major hassle, they are also a major cost. Radio frequency identification (RFID) technology used to tag and track bags promises big improvements over the hand-scanned bar codes that have been the industry standard since the 1990s.

A report by SITA (Société Internationale de Télécommunications Aéronautiques) in 2017 found that the U.S. air transport industry could save $3 billion in lost baggage costs with RFID tracking. Delta Air Lines was the first U.S. carrier to start using RFID tags on luggage in 2016.

"The RFID technology seems like it's from a decade ago, but the efficiencies that can be gained are huge," says Embry-Riddle School of Business Director Tom Drape.

BIOMETRICS

Biometrics is the next thing that will speed up the flow of passengers and baggage through airports, Drape says. "With biometrics, you have less need for individuals to show IDs at touch points at the airport. It might be face recognition, fingerprinting or retinal scans. China, Singapore, Turkey and Dubai all do some form of this."

Kim Becker ('97), president and CEO of the San Diego County Regional Airport (SAN) Authority, says SAN recently integrated facial recognition into its federal inspection service for international arrivals. The technology operates in concert with a U.S. Customs and Border Protection database. "It's really streamlined the processing time," Becker says. "They took out all of the automatic passport kiosks that we planned and built space for, and we were able to use this biometric technology and bypass this whole step."

Eventually, she says, the TSA could use biometrics to vet passengers in advance, to expedite the domestic security process. "That kind of technology will really revolutionize airports."

Drape says technological advancements like these will vastly improve the customer experience and help airports with their bottom line. "Airports feel better when passengers spend less time in lines, because more people spend time buying and eating things," he says.

deliver." Francis says the Escape Lounge at OAK has been very successful. A premium, fee-based space, the lounge offers food and beverages, as well as business amenities, charging stations and access to high-speed internet and complimentary tablets. Operated by an outside vendor, the lounge generated more than $300,000 in non-aeronautical revenue for the airport in 2018, Francis says.

Other customer experience initiatives at OAK include a renovation and rebranding of all 17 food and beverage concessions terminal-wide, the first of which are expected to debut in late 2019; new gate holdroom seating; restroom renovations; an automated exit lane system for arriving customers transitioning from gate areas to baggage claim and new concourse flooring, both located in Terminal 2.

Becker says she and her team are making a concentrated effort to improve the customer experience at SAN, as well.

"SAN doesn't have an incredible amount of on-airport parking; what we have to do as an airport is to find new and creative ways to increase that non-airline revenue."

Inventing New Revenue Streams

One way SAN is elevating its bottom line is by making inventive use of its former commuter terminal, which now houses what Becker calls the Innovation Lab. At the lab, SAN invites businesses and entrepreneurs to develop and test products at the airport. During a 16-week program, airport staff guide selected ideas from prototypes to a test market.

"It's in a real-time environment where they can come in and work out all the bugs for their system," Becker says. If the products prove successful, SAN may contract with them for the service; and if it expands to other airports, SAN recuperates a small percentage or royalty.

The program has already had its first success: An app called At Your Gate, which launched Jan. 31, 2018. The app allows passengers at any location in the airport to order food or retail items from any other terminal and have them delivered to them. "It started here, and now it's in five other airports across the country," Becker says.

Creative Solutions

Airports are also funding their infrastructure needs with help from public-private partnerships (P3). "There are many companies looking for opportunities to partner with airports," Gu says.

SAN partnered with a private business to help build a new, $19.2 million centralized receiving and distribution center, which began operating in 2012. However, the airport authority decided not to pursue a P3 for its Terminal 1 replacement. These types of partnerships are situational and not always in the best interest of airports for all projects, Becker says. "You do give up some aspect of control of the facility."

Smaller airports are capitalizing on niche markets to generate profits. For example, Leadville-Lake County Airport (LXV) in Colorado relies on its 9,934-foot elevation to generate income from helicopter testing companies. They come to LXV to define the maximum performance lift capabilities of their aircraft at maximum altitude, says LXV Airport Manager **Brett Cottrell** ('96, '97). Additionally, a gift shop geared to its claim as "America's highest airport" helps supplement the airport's operational expenses and fund improvements.

"We are the highest [altitude] public-use airport and the highest incorporated town in the United States," Cottrell says. "Landing here is on a lot of people's bucket lists."

Large hubs are getting creative with the use of hardstands to help deal with gate shortages, as well. At OAK, Francis recently invested in three Cobus 3000 buses to transport passengers to and from hardstand, remote aircraft parking spots. "This will provide a bit of flexibility during peak periods of flight activity," he says.

SEA-Tac is regularly using hardstands to deal with its gate shortage, Ehl says.

Rising to the Challenge

Increasing non-aeronautical revenue, improving the customer experience, and renovating and expanding terminal facilities are all positive efforts for the airport industry, but Ehl, who retired in June 2019 after 27 years at SEA-Tac, says airports may ultimately need to look to one another to handle the growing number of passengers.

"Given the current growth trend and our capacity constraints, [SEA-Tac is] going to be maxed out in three years," he says. However, there are three airports, operated by three different political entities, in the Puget Sound area. "Theoretically, if they were balanced in a system, we'd have capacity."

Amin agrees: "As the demand on hub-international airports grows, I believe the only way to continue to support the growth of our industry is to utilize strategically located regional airports near the hub airports to help alleviate some of the congestion."

Despite the many challenges facing the nation's airports, Amin has no doubt that the industry will address the need. "I believe humans, when given a challenge, always rise to it," he says.

DID YOU KNOW?

✈ Branson Airport in Missouri is the only privately owned and operated commercial service airport in the United States. Embry-Riddle alumnus Jeffrey Bourk ('95) is the airport's executive director.

After working on thousands of small films and productions, Nathan VonMinden dove into the world of feature films with *The Challenger Disaster*.

Silver Screen Attraction

Nathan VonMinden applies engineering background to a new career as a screenwriter and director

BY MICHAELA JARVIS

When Nathan VonMinden ('05) was growing up, he spent so much time watching movies in his hometown of Brenham, Texas, that his family worked out a special system for getting him home. If they received a collect call from him, they knew not to accept the charges — and instead to hang up, get in the car and go pick him up at the movie theater.

"Film was just one of those things that I loved when I was a kid," VonMinden says. "I always wanted to figure out what exactly it was in a film that made it good, and I just loved dissecting and talking about movies. I was always at the movie theater."

In high school, when not watching movies, VonMinden concentrated on math and science. After graduating, he studied aerospace engineering at Embry-Riddle — first at the Prescott Campus in Arizona, and then in Daytona Beach, Florida, where he moved so he and his wife, Meleice, could enjoy the beach, and she could be close to educational opportunities of her own.

VonMinden earned his bachelor's degree in 2005, and he started working as a production engineer at Homac Manufacturing Company in nearby Ormond Beach.

Merging Passion and Skill

VonMinden's passion for film, however, continued to grow. Videos he had made for church groups he belonged to were well received, and more video production projects came his way. What started as a hobby soon evolved into a second job, and then a career.

His engineering skills proved to be an asset.

Like engineering, filmmaking is about "having a vision for reality and trying to solve it into existence," he says, "taking disparate pieces and trying to make them into one thing."

"I'm putting my engineering education to full use," VonMinden adds. "Both engineering and filmmaking are about communication, collaboration and problem solving, all things that I learned at Embry-Riddle."

The Big Screen

With thousands of small films and productions to his name, VonMinden moved into the world of feature films in 2019 with *The Challenger Disaster*. The film debuted in January at 12 cinemas nationwide and became available on iTunes, Amazon and other online video outlets. VonMinden recently partnered with a distributor, and DVDs of the film are now on sale at Walmart stores across the country. "Getting into Walmart was a big deal for us," he says.

The movie tells the story of Roger Boisjoly, an engineer who tried to stop the launch of the ill-fated Space Shuttle Challenger in 1986 and his post-disaster whistleblowing, which subsequently ended his engineering career.

VonMinden says he learned as a student at Embry-Riddle that engineers had tried to prevent the disaster. "[That fact] lodged somewhere deep in my brain, and it became like a perpetual itch that I kept scratching and scratching."

Starting in 2011, he began researching the tragic accident and studying the Rogers Commission Report, which was based on the work of a presidential commission that investigated what had occurred. About two and a half years ago, he began writing the screenplay.

Engineering Ethics

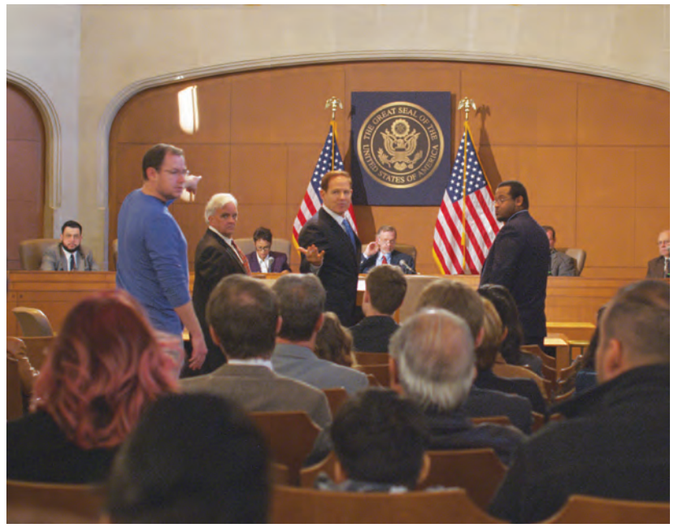
VonMinden says he was fascinated with the intersection of engineering and ethics that Boisjoly's story represented, and with the engineer's courage to speak truth to those in power.

"Everything that's made comes into existence because of an engineer," VonMinden says. "The thing is, you have to remember the person who is going to use whatever you're going to make. You have to prove that it works so you don't violate the public trust."

VonMinden quit his day job as a production director at Grace Point Church in San Antonio to make the film. He acknowledges that, despite his operating an agency that provides marketing and production for outside clients and supports his film projects, the pressure has been intense.

"That's the sacrifice, though, that my wife and I were willing to make," he says, "so that the engineers who were incredibly brave, who stood up for what was right could be honored in our culture."

***The Challenger Disaster*, written and directed by Nathan VonMinden, tells the true story of an engineer who tried to stop the launch of the Space Shuttle Challenger.**



Howard Walls Jr., center, was inducted posthumously into the Daytona Beach Campus' Athletics Hall of Fame.

All-American Hurdler Honored with Memorial Athletic Scholarship

BY MELANIE STAWICKI AZAM

Howard Charles Walls Jr. ('10, '12) was known for his hurdling, coaching and easygoing personality.

"Howard was just one of those guys everyone liked. I don't think I ever saw him mad," says Chris Harter ('13), a former teammate who is helping to establish a scholarship at Embry-Riddle in Walls' honor.

Walls made a name for himself as a hurdler on the Daytona Beach Campus' track and field team from 2006 to 2010. He was the first All-American in the campus's track and field history and set a school record that still stands today.

Sadly, Walls, 31, of Las Vegas, Nevada, died March 4, 2018, from injuries sustained in a motorcycle crash. At the time of his death, he was the director of quality control and safety for Allegiant Airlines.

The track team was a tightknit group, Harter says, and he and several other former teammates wanted to do something to remember Walls. A scholarship for student-athletes seemed to be the perfect choice.

The Howard Walls Jr. Memorial Scholarship will be awarded to an Embry-Riddle track and field student-athlete. More than $28,000 has been raised so far for the scholarship, in part through a university crowdfunding campaign. As an endowed memorial scholarship, the university is able to award a scholarship in Walls' name each year in perpetuity.

In January 2019, Walls was inducted posthumously into the Daytona Beach Campus' Athletics Hall of Fame.

MAKE A GIFT
To donate to the Howard Walls Jr. Memorial Scholarship: **givingto.erau.edu/walls**

FILE PHOTO/ALISON SMALLING

THE BOEING COMPANY CREATES A PERMANENT $3 MILLION ENDOWMENT

Scholarships aim to increase diversity in the pilot workforce

BY MELANIE STAWICKI AZAM

The Boeing Company recently established a $3 million permanent endowment for scholarships at Embry-Riddle and announced its first cohort of Boeing Scholars.

The 22 scholarship recipients were selected based on their academic achievements, as well as their demonstrated financial need. The Boeing scholarships will focus on increasing the number of women and underrepresented minorities in the aviation industry, and supporting military veterans and their dependents enrolled at the university. However, all students pursuing certification as a pilot or an airframe and powerplant mechanic are eligible to apply.

"At a time when we are facing a global shortage of aviation professionals, it is critically important to widen the talent pipeline," says Embry-Riddle President P. Barry Butler. "It is an honor to partner with Boeing to enrich and enhance the aviation workforce."

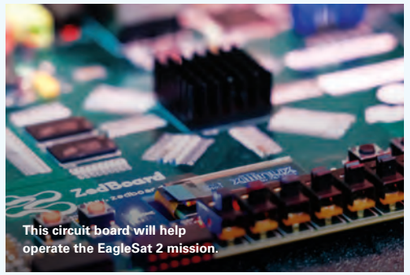
According to Boeing's 2018 *Pilot & Technician Outlook*, the industry will need 790,000 new civil aviation pilots and 754,000 new maintenance technicians to fly and maintain the world's growing fleet of aircraft over the next 20 years. The forecast is inclusive of the commercial aviation, business aviation and civil helicopter industries.

The $3 million award to Embry-Riddle builds upon Boeing's long-standing support of STEM (science, technology, engineering and mathematics) programs, women, military veterans and minorities. In 2018 alone, Boeing contributed a record $284 million to build better communities worldwide.

LEARN MORE
For more information about the Boeing Endowed Scholarship: **givingto.erau.edu/boeing**

Flight instructor Abby Pasmore, left, works with Eric Tetteh to preflight a Diamond DA42.

TOP: CONNOR MCSHANE; BOTTOM/FILE PHOTO: DARYL LABELLO



This circuit board will help operate the EagleSat 2 mission.

EagleSat 2 Will Take Off with Donors' Support

BY MELANIE STAWICKI AZAM

Embry-Riddle engineering students are building a nanosatellite that NASA will launch into space next year.

But they could not fund the roughly $200,000 in hardware needed to build the cube satellite without the help of donors, says Daniel White, assistant professor of mechanical engineering and the project's faculty adviser. To date, more than $60,000 has been contributed toward the project.

"It's pretty unique that students would have an opportunity like this so early in their academic careers," White says. "They really have benefited from the philanthropy and outreach."

The project follows the successful launch of a previous student-designed and -built cube satellite: EagleSat 1, which was deployed in 2017 in partnership with NASA's CubeSat Launch Initiative. The current project, appropriately named EagleSat 2, is one of 21 proposals that were accepted in 2018 for the next round of NASA's Educational Launch of Nanosatellites Missions program.

The project has allowed about 50 engineering students to gain hands-on spacecraft engineering experience, as well as the opportunity to conduct research in space. The cube satellite will gather information about cosmic ray particles and the effects of solar radiation on computer memory, White says.

Eight teams are working on various aspects of the satellite for a launch date in mid-2020. Following the cubesat's launch and deployment, the students will operate the mission and record and report to NASA all of the scientific findings and data communicated by EagleSat 2 to their campus headquarters.

Go to **givingto.erau.edu/eaglesat** or contact **steven.bobinsky@erau.edu** to support EagleSat 2.

Sharing the Bounty

Family farm started by alumni couple helps feed local community

BY MELANIE STAWICKI AZAM

David McWilliam has achieved his childhood dream of becoming both a pilot and a farmer.

Growing up in a suburb of Detroit, David McWilliam ('92) wanted to be two things when he grew up: a pilot and a farmer.

Decades later, he's succeeded at doing both. He is an international pilot for Delta Air Lines and runs Eden Ridge, a 10-acre organic farm in Brighton, Michigan, that donates much of its produce to feed the local community.

"I am happy with the balance," David says. "I love my job. I fly internationally now to Asia, and I get to explore some great cities."

When he isn't flying, David is driving his tractor, weeding the fields or packing produce with his wife, Sherry (Pauling) McWilliam ('92), and their two children, Alex, 16, and Amelia, 13, on their family farm.

"I love farming, being outside and the manual labor part of it," David says. "It is not unusual for me to go out early in the morning and come in late."

David and Sherry are both pilots who earned bachelor's degrees in aeronautical science from Embry-Riddle and met while working as flight instructors. Neither one had a farming background, so when they bought the farm in 2013, they had to learn along the way. Eventually, they started donating the surplus produce that they grew, and an idea began to take root.

"We knew we wanted to use it to help the community in some way," David says. "Then we got volunteers from church to help out, and it kind of took on a life of its own."


The McWilliam family runs Eden Ridge, a 10-acre organic farm in Brighton, Michigan.

Produce from Eden Ridge helps feed 850 families through a local food bank.

A Passion for Aviation and Agriculture

David and Sherry share a passion for flying. When they met in 1992, Sherry was a flight training manager at Embry-Riddle, and David was one of the instructors she supervised.

"We had a really tightknit group," David recalls. "It was when the economy was not good for aviation, so we were instructors for a few years, and we became good friends."

David's marriage proposal to Sherry made the local news when he hired an airplane to tow a banner that publicly popped the question at Embry-Riddle's 1996 airshow and alumni reunion.

"It was all a big surprise," David recalls. "Halfway through the airshow, we got permission to fly the banner by."

The couple married in 1997 and moved to Atlanta, where David worked as a pilot for Atlantic Southeast Airlines, and Sherry was chief pilot at a flight school. Later, David was hired by Delta, and when Delta merged with Northwest Airlines, David seized the opportunity to move home to Michigan.

They bought the farm, in part, because their daughter rode horses; and they began planting everything from tomatoes and cucumbers to melons and pumpkins.

"A lot of it was trial and error," David says. "One of the biggest challenges is that we do everything organically and non-GMO."

Organic pest control methods are more labor intensive than non-organic, he says. They also use hoop houses, which are similar to greenhouses, to extend the growing season until November.

As the farm began producing way more than their family could consume, David and Sherry decided they wanted to share the fruits of their labor.

"We just felt very strongly, that since we were blessed with this land, we should give back to the community in some way, if we could," Sherry says.

Bridget Brown, director of Food Secure for Livingston County at Gleaners Community Food Bank of Southeastern Michigan, says the McWilliams' farm helps feed approximately 850 families who receive assistance through the local Shared Harvest Pantry. Produce prices can pose a significant barrier for struggling families, who are trying to balance nutrition and affordability, she says.

> **"We just felt very strongly, that since we were blessed with this land, we should give back to the community in some way, if we could."**
> **— SHERRY MCWILLIAM**

"Dave and Sherry McWilliam help make fresh, healthy vegetables more accessible. They've made a real and lasting difference in the lives of our families," Brown says.

Since 2014, Eden Ridge has donated about 12,300 pounds of food, most of which consists of mainstream fruits and vegetables, like tomatoes, cucumbers, strawberries and melons. Dave and Sherry farm 2 acres of their 10-acre property, which is also home to two horses, three cats and 10 chickens.

"On average, we donate 3,000 to 4,000 pounds a year to the food bank," David says. "The rest goes to a roadside stand, which is donation-based only, so those in the neighborhood that need it can take it for free, and others can donate something. All of the donations offset the cost of the farm."

Sherry says David is definitely the one who is most passionate about the endeavor, sometimes working outside from dawn until dusk.

"I enjoy it in smaller doses," says Sherry, who is also an instructor of Holy Yoga, a Christ-centered, faith-based style of yoga. "It's always busy, between the job, the kids and the farm."

The couple also operate another unique nonprofit. Joining with three other families in 2016, they bought an old Michigan lighthouse that had been abandoned for 40 years and are in the process of slowly restoring it. David discovered the North Manitou Shoal Lighthouse on Lake Michigan on a Boy Scout trip.

"Sherry kind of gets dragged along on these crazy expeditions of mine," David says. But Sherry says she wouldn't have it any other way.

EDITOR'S NOTE: *Learn more about the McWilliams' farm at* ***edenridgefarm.com****.*

ALUMNI NEWS

MESSAGE FROM THE EXECUTIVE DIRECTOR

On July 20, the world celebrated a legacy: the 50th anniversary of NASA's Apollo moon landing. Buzz Aldrin and Neil Armstrong, the first people to walk on the moon, at once made history and became legends.

This summer, we at Embry-Riddle also celebrated, as two legendary administrators took off for new horizons. Together, Chancellor Frank Ayers ('87) and Dean of Students Larry Stephan (H '15) helped build the legacy that is today's Prescott Campus. Frank stepped down after a decade as chief administrator of the campus to return this fall to the classroom, once again, as professor for the College of Aviation at the Daytona Beach Campus. And, Larry, who moved to Prescott in 1979 to be the campus's director of recreational sports and became dean of students in 2009, retired after more than 40 years of service.

I have had the good fortune to work with both of these legends.

Since moving to the western campus 10 years ago, Frank and his wife, Debbie, have mentored and managed their Prescott Campus "Homestead" and its family members with incredible respect, hard work, discipline and tender loving care.

The result: new facilities, increased enrollments, new degree programs, greater student and faculty diversity, seven new athletic programs, and six (more) National Flight Championships, to name just a few. Thankfully, Frank's servant leadership will continue at Embry-Riddle in Daytona Beach.

Nearly every Prescott Campus student has heard Larry call their name as they crossed the stage to accept their diploma. A regular commencement announcer, his and his wife Brenda's positive influence extended beyond the athletics program that Larry built from the ground up. In 2015, Larry was named an honorary alumnus of the university for his leadership and contributions to the campus community. In addition to the unwavering support they've given students and families over the years, Larry and Brenda created the Larry K. and Brenda S. Stephan Champions of Character Endowed Scholarship. To support the scholarship: **givingto.erau.edu/stephan**.

Growing Eagle Graduates

This past spring, the office of Alumni Engagement welcomed more than 1,700 graduates into the Eagle family — our largest collective class of graduates to date. If you ever have doubts about the future of our industry and its leaders, attend one of our commencement ceremonies. I assure you that you will be impressed and encouraged.

Chancellor Frank Ayers, left, and Dean of Students Larry Stephan dedicated years of service to the Prescott Campus.

Talon*Talks* Podcast

I am proud to announce a new series of Embry-Riddle podcasts — featuring your fellow alumni. To listen, search your favorite podcast app for "WIKD Studios," the student radio station at the Daytona Beach Campus. For more information: **alumni.erau.edu/podcast**.

Additionally, we will be hosting Lunch and Learn lectures at various locations throughout the country in the coming year. Let us know if you have an area of expertise you're willing to share.

As you review this issue, I hope that you can see the difference that Eagles make in and for the world. We look forward to seeing you and hearing about your successes. Please call, stop by the office or come to an event. OctoberWest (Oct. 3-5) at the Prescott Campus and Homecoming at the Daytona Beach Campus (Oct. 10-12) are just around the corner. I hope to see you there!

Forever an Eagle,

Bill Thompson ('87, PC)
Executive Director

facebook.com/ERAUAlumni
twitter.com/ERAU_Alumni
alumni.erau.edu/LinkedIn
Join the Eagle Network: alumni.erau.edu/join
instagram.com/erau_alumni/
alumni.erau.edu/podcast

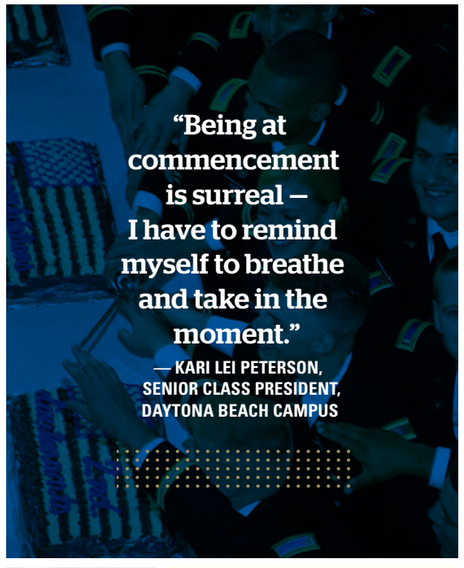
EAGLE TAKE OFF

Record number of graduates celebrate spring 2019 commencement

DEGREES AWARDED (TOTAL)*

1,488

Doctoral degrees: **4**
Master's degrees: **353**
Bachelor's degrees: **1,095**
Associate degrees: **36**



"Being at commencement is surreal — I have to remind myself to breathe and take in the moment."
— KARI LEI PETERSON, SENIOR CLASS PRESIDENT, DAYTONA BEACH CAMPUS

NUMBER OF COUNTRIES REPRESENTED

26

GRADUATING WITH ACADEMIC HONORS

38%

FEMALE GRADUATES

24%

GRADUATES RANGED IN AGE FROM

17† TO 63

MALE GRADUATES

76%

*Includes all May and June 1, 2019, graduation ceremonies (DB, PC, WW), †High School Dual Enrollment

Daniel Ponce de Leon pitched seven no-hit innings for the St. Louis Cardinals in his debut on July 23, 2018. He continues to impress this season, picking up his first Major League win on July 4, 2019.

Curveball

Eagle standout Daniel Ponce de Leon conquers injury and the AAA shuffle to make a historic MLB debut

BY RYAN MOSHER

When Daniel Ponce de Leon stepped onto the mound at Cincinnati's Great American Ballpark on July 23, 2018, he became the first-ever Embry-Riddle draftee to appear in a Major League Baseball (MLB) game. What followed was one of the greatest pitching debuts in baseball history. The 26-year-old right-hander for the St. Louis Cardinals fired seven, no-hit innings against the Cincinnati Reds, becoming just the fifth pitcher in MLB's expansion era (since 1961) to take a no-hit bid through seven innings in his Major League debut.

The La Mirada, California, native has now appeared in 21 games for the Cardinals (as of Aug. 20, 2019), including 11 starts, posting a 3.30 ERA in 73.2 innings of work. Over the last two seasons, Ponce de Leon has split time between the Cardinals and their Triple-A affiliate, the Memphis Redbirds, earning Pacific Coast League All-Star honors for Memphis in 2018.

The shuttling back and forth between a Major League club and its Minor League affiliates is common for young players early in their careers, and for Ponce de Leon, a change of scenery is nothing new.

New Surroundings and a Change of Plans

Ponce de Leon started his collegiate career at the University of Arizona in 2011, before stops at Cypress Junior College (2012) and the University of Houston (2013). A three-time MLB draftee, Ponce de Leon turned down the Rays in 2010 and the Reds in 2012. An injury concern caused the Cubs to walk away in 2013. Prior to the 2014 season, he transferred to Embry-Riddle with only one thing on his mind.

But plans change.

"When I came to Embry-Riddle, I told myself I was purely focusing on baseball, but then I found a wife," Ponce de Leon says. "It's crazy to look back and see how God had a different plan than I had in my head."

In the midst of an NAIA All-American campaign for the Eagles in 2014, Ponce de Leon met Jennifer Beatty, a standout for the Embry-Riddle volleyball team from 2013-14; the two married in 2018 and have two children together, Casen and Mila.

BILLY HURST/ST. LOUIS CARDINALS

Yet Another Twist of Fate

Following a 2014 season with the Eagles that saw Ponce de Leon go 9-2 with a 1.60 ERA and 103 strikeouts in 95.2 innings, the Cardinals made him the highest draft pick in program history when they selected him in the ninth round of that summer's draft.

"I'm very grateful to coaches Randy (Stegall) and Dave (Therneau) for giving me a chance my senior year," Ponce de Leon says of his time with the Blue and Gold. "Coach Therneau taught me how to set up a good routine between starts and that has really brought about a lot of success for me."

The 6-foot-3-inch hurler moved steadily up through the Cardinals organization after being drafted. He was knocking on the big league door in 2017 while at Triple-A Memphis, when a freak accident nearly derailed his career — and his life.

> **"He's got a special makeup. You would never know he went through the type of injury he sustained. He doesn't let anything faze him ."**
>
> — EMBRY-RIDDLE HEAD COACH RANDY STEGALL

A line drive off the bat of Chicago Cubs prospect Victor Caratini on May 9, 2017, struck Ponce de Leon in the head. He was rushed to a local hospital in Des Moines, Iowa, where a CT scan revealed that he had an epidural hematoma, a condition where blood leaks from the meningeal artery into the space between the dura mater, which covers the brain, and the skull. Without an emergency craniotomy, the typical result of an epidural hematoma is death.

The surgery was successful.

Ponce de Leon spent 10 days in intensive care and more than a month in the Hawkeye State before returning home to Daytona Beach, Florida, where he spent two months recovering. He was cleared to start throwing on Aug. 9.

For the next six months, Ponce de Leon fought to regain his strength and stamina, including working out and throwing at Embry-Riddle's Sliwa Stadium over much of that time.

"He's got a special makeup," Embry-Riddle Head Coach Randy Stegall says. "You would never know he went through the type of injury he sustained. He doesn't let anything faze him. Since the moment he stepped on campus back in 2014, we could tell he was different from a mentality standpoint, and he's proved that over and over."

Ponce de Leon's baseball journey has been anything but ordinary. The native Californian has been a Wildcat, a Charger, a Cougar, a Redbird and a Cardinal. But, he is *Forever an Eagle*.

Top Eagles

Six graduates honored at alumni awards ceremony

BY MELANIE STAWICKI AZAM

Stephen J. Altemus ('87) admits that success did not come easy for him. That's what made receiving Embry-Riddle's 2019 Distinguished Alumni Award even more special, he says.

"I was not a stellar student," says Altemus, president and CEO of Intuitive Machines LLC and former deputy director at NASA's Johnson Space Center. "I struggled to get through engineering school."

Altemus and five other graduates were honored for their outstanding accomplishments at the Eagle Alumni Awards ceremony on April 5, 2019. Nominated by their respective college or program, the awardees included Altemus (College of Engineering), Brian Hirshman ('90; College of Aviation), John Longshore ('81, '84; David B. O'Maley College of Business), Patrick Marsden ('91; College of Arts & Sciences), Michelle Lucas ('00; Eagle Entrepreneur/Communications) and Edmund Otubuah ('03; Alumni Network Volunteer).

"This program is a celebration of what Embry-Riddle graduates achieve across multiple business sectors and around the world," says Bill Thompson, executive director of alumni engagement.

The awardees also serve as role models to current Embry-Riddle students, adds Marc Archambault, senior vice president of philanthropy and alumni engagement.

"What you have achieved is a great testament to the impact of our university and our alumni, and of what we can become when we work together," Archambault told the honorees at the ceremony.

For more about each award winner: **alumni.erau.edu/2019awards**.

From left: Marc Archambault, Michelle Lucas, John Longshore, Patrick Marsden, Stephen J. Altemus and Edmund Otubuah.

DAVID MASSEY

CLASS NOTES

Send us your news! Email your life events to **eralumni@erau.edu**. For guidelines, visit **alumni.erau.edu/notes_guidelines**.

Career News

1960s

Terry Maxwell ('64), a Miami Campus graduate, retired in 2006 as a Federal Aviation Administration/military systems certification consultant. His most recent certification programs were the C5 cargo plane reliability and commercial engine upgrade and Bombardier electronics military upgrade at Wright-Patterson Air Force Base in Dayton, Ohio. Earlier in his career, he worked at Pratt & Whitney and GE Engines as a component designer/group systems manager.

1970s

Warren Kroeppel ('76), chief operating officer of Sheltair Aviation, received the New York Aviation Management Association's William F. Shea Award. Kroeppel joined Sheltair in 2012, after a 35-year career that included serving as deputy general manager at John F. Kennedy International Airport and 10 years as general manager of LaGuardia Airport.

William Seidl ('78), a flight dispatch coordinator, is celebrating 40 years at Air Wisconsin.

1980s

Rich Burkhardt ('82, '08) was appointed senior manager of cargo field and mail operations at American Airlines Cargo. Burkhardt was also honored as the 2018 Kennedy Airport Airlines Management Council (KAAMCO) Person of the Year.

Col. Lloyd Terry ('83, '92) was honored in a retirement ceremony held Dec. 14, 2018, at Naval Air Station Fort Worth Joint Reserve Base, Texas. During his 35-year career, Terry became the first commander of Air Force Reserve Command's (AFRC) only Cyber Operations Group, which grew into AFRC's only Cyberspace Wing earlier this year. Terry began his career by joining the ROTC at Embry-Riddle. His assignments included time at Strategic Air Command Airborne Command Post, U.S. Central Command and the Special Operations Command Central.

Tanya Whitney ('85, '00) recently attended the National Veterans Creative Arts Festival in Des Moines, Iowa. Whitney was selected as a Gold Medal winner in the creative writing category for an inspirational poem.

Jon Downey ('87) is president of AssuredPartners Aerospace in Denver, Colorado. Downey was previously vice president for U.S. Aviation Underwriters. His most recent role was senior vice president of operations and head of U.S. Aviation for Allianz.

Chris Hill ('89, '97) was hired as director of safety for Helicopter Association International. He has more than 32 years of rotary-wing and operational aviation safety experience, including as a helicopter pilot in the U.S. Army and Coast Guard.

1990s

Tami Lamp ('93) was selected as senior vice president and chief human resources officer for Kaiser Foundation Health Plan and Hospitals, aka Kaiser Permanente.

Brad More ('94) was appointed chief architect of Hapi, a data streaming, integration and enrichment platform designed to solve the hotel industry's data integration challenges.

Wayne Poole ('94), a veteran of the U.S. Air Force, was named chief audit officer for East Carolina University's office of Internal Audit and Management Advisory Services.

Wael Saeed ('95) was named chief financial officer for BBA Aviation's Global Engine Services leadership team.

Terry Maxwell

Warren Kroeppel, center, with Bill Shea and Christina Callahan

Rich Burkhardt

Col. Lloyd Terry, right

Tanya Whitney

Tami Lamp

Brad Brandt ('97, '10), who is aviation director at the Louisiana Department of Transportation and Development, received the state's Civil Service League's Dunbar Award and the National Association of State Aviation Officials' Chairman's Award. He was also selected to chair the National Association of State Aviation Officials.

Walter R. Price ('97), who is an Air Force Research Laboratory (AFRL) senior systems engineer, received the Career Achievement in Government Award at the 2019 BEYA STEM Global Competitive Conference on Feb. 9, 2019, in Washington, D.C. Price is the scramjet propulsion technical area lead at AFRL's Aerospace Systems Directorate.

Gregory J. Bowles ('98), vice president of global innovation and policy at the General Aviation Manufacturers Association (GAMA) in Washington, D.C., will serve a three-year term on the ASTM International board of directors. Bowles has been with GAMA since 2005. Bowles is also an elected fellow with the Royal Aeronautical Society.

Jaclyn Gilbert ('98) was elected to the National Business Aviation Association's Certified Aviation Manager Governing Board. She is the training program manager for trip support services at Universal Weather and Aviation and vice president of Women in Corporate Aviation.

Moriba Jah ('99), who is an astrodynamicist, space environmentalist and an associate professor in aerospace engineering and engineering mechanics at the University of Texas at Austin, was selected as a TED Fellow. Jah joined 20 change-makers from around the world to deliver a talk on the TED stage in April. Jah is the first astrodynamicist and aerospace engineer to be selected as a TED Fellow. For more about Jah and his research: **lift.erau.edu/space-junkie**.

MORIBA JAH: MERRICK ALES

2000s

Rebecca DeLorenzo ('03) is executive director of the American Red Cross Space Coast Chapter, which covers Brevard, Flagler and Volusia counties in Florida. She joined the Red Cross in March 2017, after a decade with the Flagler County Chamber of Commerce. DeLorenzo lives in Palm Coast with her husband, Jason, and daughter, Lorelei.

Matthew Pfrommer ('03, '07) is vice president of strategic capabilities at Cubic Corporation's Cubic Mission Solutions business division.

David Hansell ('04) is public policy manager at DJI, a civilian drones and aerial imaging technology company. Previously, Hansell was the global aviation policy lead for Facebook.

U.S. Army Veteran Capt. Fred Schwark ('05) is the chief financial officer for Drexel Hamilton, an investment bank owned and operated by service disabled veterans.

John Janokaitis ('06), who is chief of media relations for Aerodyne Industries, was honored with the Kolcum News and Communications Award at the National Space Club Florida Committee's 2018 Celebrate Space Awards Banquet. The award recognizes news media and other communications professionals for excellence in telling the space story along Florida's Space Coast and throughout the world. Janokaitis is in his 40th year at the Kennedy Space Center and serves as a project manager supporting NASA and the Space Launch System Program.

Timothy Mercer ('08) joined Bluestein Thompson Sullivan in South Carolina. An attorney, he will practice exclusively in the area of veterans' disability.

Charles Cunningham ('09, '14) is vice president of sales and marketing at ARGUS International.

Timothy J. Giardino ('09) was appointed vice president of human resources for Cantata Health, a provider of electronic health records and financial and revenue cycle management solutions.

Ryan Hartman ('09) is now CEO of World View, based in Tucson, Arizona, which is developing stratospheric balloon platforms to perform satellite-style tasks in remote sensing and communications. Hartman was previously president and CEO of Insitu.

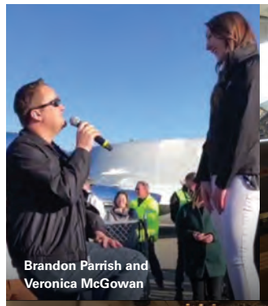
2010s

Landon Breazeale ('10) is an associate attorney for Nashville-based Schaffer Law Firm. He was previously an attorney with the state of Tennessee and a business manager for TBI Airport Management in Georgia.

John Reid ('10) is regional sales manager at FreeFlight Systems.

Darshan Divakaran ('11) is an unmanned aircraft systems (UAS) program engineer with the North Carolina Department of Transportation's Division of Aviation. He has expertise in unmanned and manned aviation, flight operations, airborne safety, remote sensing, geospatial analysis and program management. He is the subject matter expert on unmanned aviation for the North Carolina Governor's office, legislature, state agencies and public safety organizations. He co-leads efforts to work with government agencies, industry and higher education in North Carolina to integrate a statewide UAS plan focused on public safety operations. He also oversees flight operations safety for the Federal Aviation Administration's UAS Integration Pilot Program in North Carolina, and he is the founder and president of Airavat, which provides UAS program management and training support to federal, state and local agencies.

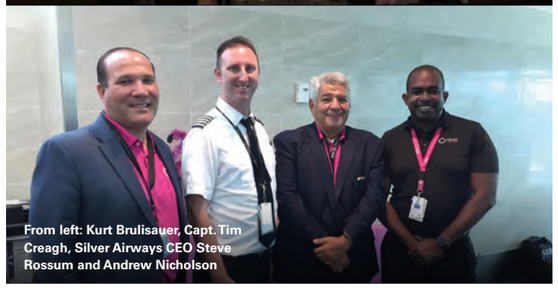
Joe Williams ('12) was hired as F-35 production operations supervisor at Lockheed Martin Aeronautics. Williams is a private pilot and has nearly 23 years of aviation experience, including



Brandon Parrish and Veronica McGowan

Second Officer Ronald Lee, First Officer Ching Kwok and Capt. Matt McLaughlin

Capt. John M. Antoniades and First Officer Joseph Rizzo



From left: Kurt Brulisauer, Capt. Tim Creagh, Silver Airways CEO Steve Rossum and Andrew Nicholson

structure mechanics, low observable (stealth) coatings and nondestructive testing. He held leadership positions in the U.S. Navy for more than 15 years, and was most recently one of just six nondestructive inspectors at Lockheed Martin Aeronautics in Fort Worth, Texas.

Adam Luck (’13), CEO of City Care, was appointed to the Oklahoma Pardon and Parole Board. City Care is a nonprofit organization serving Oklahoma City’s homeless population.

Kofi Atiemo (’16) was recently promoted to Captain B777 at Emirates Airlines. In a career spanning 17 years, he has flown the DC9, B737, SAAB340 and B757/767. Prior to aviation, Atiemo worked in wireless communications as a support engineer. He currently resides in Dubai, United Arab Emirates, with his wife, Eunice, a consultant pediatrician.

Nicholas Ferraz (’16, ’17) is a manufacturing engineer at Lockheed Martin.

Dustin L. Wallace (’16), a lieutenant commander in the U.S. Navy Reserve and a licensed chief engineer in the U.S. Coast Guard, was selected for NASA’s next Human Exploration Research Analog (HERA) mission. Located at Johnson Space Center in Houston, Texas, HERA is a three-story habitat designed to serve as an analog for isolation, confinement and remote conditions in exploration scenarios. In 2016, Wallace was a scientist-astronaut candidate with Project PoSSUM (Polar Suborbital Science in the Upper Mesosphere).

EAGLE AUTHORS
ON THE BOOKSHELF

Paul “Pauly” Freeman (’91, ’98) authored *The Legendary Hunters of Texas: A True Story of Honor, Courage and Commitment*, which was published in 2016. It documents the history of VF-201/VFA-201, the first Naval Reserve Jet Fighter Squadron to perform live combat missions during a Naval Reserve Fighter Squadron’s unit mobilization into active duty service (Operation Iraqi Freedom, 2003). Freeman was the F-18 unit maintenance chief for the North Texas squadron, which was decommissioned in 2007. A former adjunct faculty member, he currently works as a Federal Aviation Administration aviation safety inspector/program manager. He earned a B.S. in Professional Aeronautics and a Master of Aeronautical Science from Embry-Riddle. All sale proceeds from the book are donated to support veterans who suffer from post-traumatic stress disorder.

Elliot J. Gindis (’08) co-authored *Up and Running with AutoCAD 2019: 2D Drafting and Design*, which was published by Elsevier, Inc., in 2018. It is the 10th edition of his original book, *Up and Running with AutoCAD 2009*. Gindis, who was a professional AutoCAD draftsman prior to enrolling at Embry-Riddle, started writing the first edition of the book while he was a student at the Daytona Beach Campus. “After being introduced to the managing editor of Elsevier Science & Technology division by one of my professors, Dr. Howard Curtis, I was signed to a publishing contract and got my first edition published,” he says. Gindis, who earned a B.S. in Aerospace Engineering, is a flight test engineer for the U.S. Air Force. He updates his book each year as new AutoCAD software is developed. Gindis also owns and operates Vertical Technologies Consulting and Design, an AutoCAD training firm.

Benjamin Jones Jr. (’18) authored a book of poetry titled *Inside a King’s Mind*, which was published in 2019. Jones is an aircraft service technician who works at Gulfstream Aerospace in Savannah, Georgia, as a contractor. He earned an associate degree in aeronautics from Embry-Riddle.

Herbert McKinley (’86) authored *Thayer’s Return: Early History of West Point in Verse*, which was published in 2019. This narrative poem presents a fictional discussion between Sylvanus Thayer, the father of West Point, and a modern-day cadet. The author, who uses the pen name H.J. Koch, earned a B.S. in Professional Aeronautics from Embry-Riddle. He is a captain on the Airbus 330 for American Airlines and resides in Raleigh, North Carolina.

Wes Oleszewski (’87) authored *Invisible Evil*, which was published in 2018. The suspense novel subsequently became a No. 1 Amazon.com Bestseller in three categories: Aviation, Aviation World History and Aviation Piloting and Flight Instruction. “It’s a stunning aviation thriller with a twist you won’t see coming,” Oleszewski says. The author of 25 books since 1991, Oleszewski is a former commercial airline captain and corporate pilot, and the creator/illustrator of the syndicated *Klyde Morris* comic strip. He holds a B.S. in Aeronautical Science from Embry-Riddle.

Donna Roberts (’10), an associate professor and chair of the social sciences and economics department and undergraduate research at Embry-Riddle’s College of Arts & Sciences in Germany, authored two poetry books: *Sometimes the Runner Stumbles: Brief Glimpses of Descent Vol. I*, published in 2016; and *Sometimes the Angel Falls: Brief Glimpses of Descent, Vol. II*, published in 2019. Roberts earned an MBA – Aviation and a Master of Aeronautical Science from Embry-Riddle.

James Sowell (’99) authored *Making Larger Space Station Ships for Solar System Exploration*, published in 2016 by Lambert Academic Publishing. Based on Sowell’s master’s thesis conducted at American Public University, the book addresses the history of space stations and optimal space station design, and includes a space station design invented by the author. Sowell earned a B.S. in Professional Aeronautics from Embry-Riddle. He is an aerospace consultant, a member of the American Institute of Aeronautics and Astronautics and a member of the AIAA Space Colonization Technical Committee.

Shane Twede (’05) authored *Escape from Ludomania*, an aviation-based adventure novel that was published in 2018. Twede is a commercially rated pilot and lives in Washington. He earned a B.S. in Professional Aeronautics from Embry-Riddle, and is also the author of the *Derby & Charlie* children’s book series.

ARE YOU AN AUTHOR?

Eagle Authors features traditionally and self-published books authored by Embry-Riddle alumni and faculty. To have your book considered, email **liftmag@erau.edu** by May 1 for the fall edition and by Dec. 1 for the spring. Submission does not guarantee publication.

Marriages/ Engagements

Brandon Parrish (’16) proposed to **Veronica McGowan** (’16) in December 2018 with a ring that had just flown to space on Virgin Galactic’s VSS Unity SpaceShipTwo. Both work for The Spaceship Company, the Virgin Galactic sister company that manufactured SpaceShipTwo.

Other

Roger Sultan (’93) recently flew with fellow Eagle **Todd Breem** (’94). Both men are pilots for United Airlines. Sultan, who is based in Washington, D.C., was recently upgraded to B737 captain.

Kurt Brulisauer (’00), **Andrew Nicholson** (’02, ’08, ’10) and **Capt. Tim Creagh** (’04), who are all Silver Airways employees, recently celebrated the airlines’ first U.S. commercial flight of the ATR-600. Brulisauer is senior vice president of ground operations and supply chain, Nicholson is safety specialist, and Creagh is assistant system chief pilot.

Capt. John M. Antoniades (’04) and **First Officer Joseph Rizzo** (’02) shared the cockpit recently and got air traffic control services from **Brad Mason** (’08).

Second Officer Ronald Lee (’14), **First Officer Ching Kwok** (’07) and Capt. Matt McLaughlin, a Worldwide Campus student, were three of four pilots on an April 12, 2019, flight of a Cathay Pacific Boeing 777, flying from Chicago O’Hare to Hong Kong.

Molly Hatchet Concert Draws a Crowd

Readers identify the date, occasion and several students in this photo (published in Lift*'s spring 2019 edition) of a concert hosted at the John Paul Riddle Student Center, aka University Center (U.C.), at the Daytona Beach Campus.*

Insane Crowd

I'm in that picture! Saw it and said, yeah, I was there (see right side), along with Dan Gaudet ('89). It was spring of 1985; Molly Hatchet performed in the U.C. [It] really was insanely packed in there.

Derrick Seys ('90)
B.S. Aeronautical Engineering

Lambda Chi Alpha Brothers

I received the spring issue of *Lift* and on the back is a photo of a very young version of me. I'm pictured one row back from the front, just right of center, and proudly showing my Lambda Chi Alpha colors. The person just over my left shoulder is Bobby Flynn ('87), and the gentleman with his left hand up to my left is Matt Maranto ('85), both also Lambda Chi Alphas.

Al Witkowski ('87)
B.S. Aeronautical Engineering

Roommates Spotted!

The photo is from the spring 1985 trimester, and based on the banners in the background, sometime in February. I recognize two of my old roommates in the photo: David Nelson ('85) and Steve Williams ('86), both in the front row. I'm pretty sure I was also there, as I volunteered on the Entertainment Committee.

Retired U.S. Air Force
Lt. Col. Patrick D. Moroney ('85)
B.S. Aeronautical Engineering

Insider Information

The photo was taken the evening of Saturday, March 2, 1985, at the Molly Hatchet concert hosted by E-RAU Entertainment, part of the Student Government Association. Not only was I there, but I helped organize and run the show.

I was a very active member of the Entertainment Committee from 1982-1986. In 1985, I was vice chairman, serving with Chairman Mark Creager ('86, '91) and Stage Manager Darrin Bond.

Molly Hatchet was the only concert that year and one of only a handful where we used the "Flight Deck" bar/pub area for the stage. In addition, Molly Hatchet's concert contract rider required us to rent a specific make/model of piano, and it happened to be white.

Molly Hatchet (especially David Hlubek) had some very specific/legal language in their contract rider. The concert marked the first time we had security-trained/radio-equipped members of the Entertainment Committee (dressed in plain clothes/undercover) pre-positioned in the front row of the crowd. Two that I recognize are Paul Brinkman ('87), one of our lead stage crew members, and Chad Sanders, our lead sound engineer.

I believe one of the *Phoenix* yearbook photographers took the photo.

David C. "Hoss" Robertson ('86)
B.S. Aeronautical Science

In Memoriam

WATCH
Jay and Leila Adams were honored in 2017 at the Blue & Gold Gala for their long-standing commitment to Embry-Riddle: **lift.erau.edu/videos-fall-2019**.

Trustee Emeritus John C. 'Jay' Adams Jr. (HonDoc '08) • Aug. 7, 2019

Jay Adams was passionate about the university he helped bring to the Daytona Beach area from Miami in 1965, as a member of the Committee of 100. The volunteer committee was formed to attract and recruit industry and jobs to the area, but Jay's dedication to the then-flight school would surpass even his expectations.

In 2015, at the 50th anniversary of Embry-Riddle's move to Daytona Beach — called Operation Bootstrap, because of the volunteer labor and sweat equity it took to move the school — Jay beamed: "Obviously, I'm very proud of [Embry-Riddle]. We've come a long way. It makes all the work worthwhile."

"We owe a debt of gratitude to Jay for his service as a chairman and member of our Board of Trustees," says university President P. Barry Butler. "In his 41 years as a board member, he worked with every president of the university. He was also an Eagle 'super fan' who supported our athletes with internship opportunities and scholarship funds."

As a trustee, Jay led the university's major capital campaigns that funded the construction of the ICI Center, the University Sports Complex and the Crotty Tennis Complex. His efforts put Embry-Riddle on the map, literally. Adams Hall, a residence hall on campus, is named in his honor.

A stalwart supporter of Eagle Athletics, in 2015, Jay was honored as a distinguished member of the Embry-Riddle Athletics Hall of Fame. And, in 2017, he and his wife, Leila, were celebrated at the annual Blue & Gold Gala for their more than 50 years of dedication and support to the university and the athletics program.

"Embry-Riddle benefited directly from his generosity and from his tireless advocacy for Daytona Beach," Butler says.

Jay passed away on Aug. 7, 2019, at the age of 83. He is survived by his wife, Leila Johnson Adams, daughters Julie Adams Rand and Ruthie Pickett (King Pickett), and three grandchildren: Caroline Carter Rand, Leila Elizabeth Pickett and Carly Crafts Pickett.

Help celebrate Jay's life and passion for Embry-Riddle. Contribute to the Jay and Leila Adams Family Athletic Endowed Scholarship: **givingto.erau.edu/adams**.

1940s

Thomas F. Root ('41)
Feb. 7, 2019

1950s

Kenneth O. Harbour ('51)
May 3, 2019

Willard E. Lineburg ('59)
March 6, 2019

1960s

Donald J. Cambria ('61)
April 2, 2019

Thomas S. "Sid" Mann III ('61)
March 6, 2019

Kenneth L. Mitchell ('61)
April 4, 2019

Oscar R. Otero ('61)
March 9, 2019

Edward O. Broach ('63)
May 2, 2019

Charles Fredrick Shipley III, M.D. ('64)
Dec. 17, 2018

Thomas W. "Tom" Butler ('68)
Dec. 2, 2018

Walter E. Whitacre ('68, '05, '13)
May 2, 2019

1970s

Retired U.S. Air Force Chief Master Sgt. Steven Joseph Uhrin ('79)
March 30, 2019

1980s

Col. Wayne P. Mayfield ('80)
Dec. 5, 2018

Michael R. Bevacqua ('84)
Feb. 21, 2019

Lawrence G. Weisman ('85)
March 16, 2019

Retired U.S. Air Force Maj. Kendall "Kenny" Eugene Sears Jr. ('86)
Jan. 5, 2019

Retired U.S. Air Force Maj. Ralph Rushworth ('87)
March 20, 2019

1990s

David W. Amberg II ('90)
March 3, 2019

William "Bill" Warren Powers ('91)
Feb. 20, 2019

DeeDee A. (Farster) Willard ('94)
May 20, 2019

Yang Ho Cho (HonDoc '98)
April 7, 2019

Rucie Moore ('98)
April 16, 2019

2000s

David J. Farley ('02)
Feb. 20, 2019

Michael T. Keefe ('05)
Feb. 2, 2019

Retired U.S. Air Force Reserve Sr. Master Sgt. William S. Rahiser ('05)
March 23, 2019

Sean Archuleta ('06)
Feb. 23, 2019

Richard J. Mosler ('08)
Jan. 9, 2019

Taylor A. Brennan ('11)
May 1, 2019

James W. Hill ('11)
March 21, 2019

Kevin L. Schafer ('12)
April 1, 2019

Retired U.S. Army Lt. Col. Lonnie E. Slade Jr. ('14)
Jan. 8, 2019

Richard "Rich" Willard Dawson ('18)
Dec. 9, 2018

Shannon N. Smith ('18)
Jan. 4, 2019

OTHER

David Comstock Hazen
Former Chair of the Aerospace Dept. and Dean of Graduate Studies
April 27, 2019

Retired U.S. Army Lt. Col. Charles E. Richardson
Professor Emeritus
March 5, 2019

HELP US MEMORIALIZE EMBRY-RIDDLE EAGLES

Notify the alumni engagement office at eralumni@erau.edu, if you are aware of any classmates who have died.
For obituaries and up-to-date death notices, visit **alumni.erau.edu/passings**.

EMBRY-RIDDLE
Aeronautical University
OFFICE OF ALUMNI ENGAGEMENT

Embry-Riddle Aeronautical University
1 Aerospace Blvd.
Daytona Beach, FL 32114

TAILWINDS

Out West

Are you in this picture? Do you know someone who is? Judging by the colorful bandannas and the high desert backdrop, this photo was taken at Embry-Riddle's Prescott Campus in Arizona, possibly at a reception of some kind at the Spruance House. The hairstyles scream 1980s. But, beyond these general assumptions, we know nothing about this photo. Help us fill the gaps in Embry-Riddle's institutional knowledge. Tell us about the event and the people in this photo. We'll share the details in the next edition of *Lift*.

Email: liftmag@erau.edu

Photo courtesy of the Embry-Riddle Archives