

Lift



**ALL
AROUND
US**

Unmanned
aircraft systems
are revolutionizing
aviation. Are
you ready?

PAGE 14

FROM THE PRESIDENT



I am amazed at the way Embry-Riddle has changed since it was founded in 1925. What was once a small aviation school has not only grown into the world's leader in aviation and aerospace higher education, but has also made steady progress toward becoming a provider of solutions to industry's biggest challenges.

Right now, Embry-Riddle is addressing some of the biggest challenges of the day through its new programs and research, especially in the field of unmanned aircraft systems (UAS).

Starting in August, the Worldwide Campus will add to its UAS education program by offering a new Master of Science in Unmanned Systems degree. Meanwhile, the university's UAS research is in full swing at our Daytona Beach, Prescott and Worldwide campuses.

This issue of *Lift* looks at the many ways UAS technology can be used and its implications for the present and the future. As you read about the "brave new world" of UAS, take note of the many Embry-Riddle alumni and faculty who are contributing new knowledge and expertise to the

UAS question. Whether it's in the military, commercial or public sectors, our faculty, students and alumni are taking leading roles in this exciting field.

Our alumni are taking the lead in the university's boardroom, as well. I'm pleased to report that the Board of Trustees elected four new members in April, two of whom are alumni, to help shape the future of the world's top aerospace and aviation academic institution.

We welcome Dr. Charles D. "Chuck" Duva, president and CEO of DuvaSawko; C. Jeffrey "Jeff" Knittel ('80, DB), president of CIT Transportation Finance; David B. O'Maley, chairman emeritus and retired president and CEO of Ohio National Life Insurance Company; and Jon W. Slangerup ('81, WW), CEO for the Port of Long Beach, Calif. These new trustees bring a wide variety of experience and solid records of leadership in their industries and communities.

With the addition of these alumni, we have reached a significant milestone in our history. For the first time in recent memory, our alumni now make up a narrow majority of our board of trustees, with many holding top positions.

We are delighted that Embry-Riddle graduates are returning to share their wealth of experience and abilities with their alma mater. With such a collection of visionary talent helping lead our way, our future has never been brighter.

Warm regards,

John P. Johnson, Ph.D.
PRESIDENT AND CEO



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READ
LIFT
ONLINE!

ON THE COVER: UAS applications are impacting how aviation professionals do their jobs in the commercial, public and military sectors.

CHATTER

ALTIMETER: HIGH POINTS AT EMBRY-RIDDLE

Daytona Beach Eagles Baseball pitcher **Daniel Poncedeleon** became the highest drafted Eagle in Embry-Riddle history with a 9th round selection by the St. Louis Cardinals during the 2014 First Year Player Draft. Eagles catcher **Darryl Knight** was drafted in the 14th round by the New York Mets. View Eagle draft history here: www.erauathletics.com/mlbdraft.

Gordon Jiroux, CEO and chief flight instructor at Universal Helicopters, which partners with the Prescott Campus to provide helicopter flight training, received the Helicopter Association International Flight Instructor of the Year award.

The Prescott Campus Golden Eagles Flight Team finished second overall at the 2014 National Intercollegiate Flying Association's SAFECON Championship. The Daytona Beach Eagles flight team placed eighth overall.

Ashok Gurjar, professor of civil engineering, was appointed chairman of the Civil Engineering department at the Daytona Beach Campus.

U.S. News & World Report ranked the **Worldwide Campus' bachelor's degree programs** No. 2 in the 2014 Best Online Programs for Veterans category.



Thomas J. Connolly

Connolly Quad

Graduation day at the Daytona Beach Campus marked the dedication of the Dr. Thomas J. Connolly Quadrangle. A monument at the quad recognizes Connolly's decades of outstanding leadership and dedicated service to the education, training and advancement of thousands of Embry-Riddle aviation professionals.

Connolly, former chancellor at Embry-Riddle, was also honored as the keynote speaker at the May 6 commencement ceremony. During his address, he shared a lighthearted story from his preflight training experience about a fellow student who failed the tower jump swimming test because he didn't know how to swim. At the encouragement of his peers, the student jumped in anyway and had to be rescued from the bottom of the pool.

"You know, motivation is a great thing. Nothing was accomplished without it," Connolly told the new graduates. "But the key to success is preparation."

Joining the Embry-Riddle faculty in 1973, Connolly served as chairman of the Aviation Education Design department, the Flight department, and the Aeronautical Science department, and as dean of the School of Aviation. In 2001, he was appointed the university's first endowed chair in aviation; and in 2005, he was named chancellor of the Daytona Beach Campus. He retired in 2007.

Since his retirement, the university looked into ways to honor Connolly. "The faculty senate came forward with a recommendation that we name the quad—the green space, the communication place, the center of campus—after Dr. Connolly. I like the symbolism. I thought it very appropriate," says Embry-Riddle President and CEO John P. Johnson.

—Alan Marcos Pinto Cesar

PRESCOTT CAMPUS ADDS MEN'S HOOPS

Embry-Riddle's Prescott Campus is establishing an intercollegiate men's basketball program. Competition will begin in the 2015-16 season in the California Pacific Conference, one of the largest Division II leagues in the National Association of Intercollegiate Athletics (NAIA).

Eric Fundalewicz will lead the program as head coach. Fundalewicz championed forming a men's basketball program at Embry-Riddle's Prescott Campus even before he joined the university as campus director of intramurals in 2013.

"Over the years I'd tell my colleagues that Embry-Riddle would be a pleasure to work for and the student-athletes

would be amazing to work with," he says. "I'm excited to be entrusted with building a successful basketball program from the ground up."

Fundalewicz has more than 12 years of distinguished basketball coaching experience to his credit, most recently as assistant coach for the women's basketball program at Northern Arizona University in Flagstaff.

"Eric is the ideal choice as we continue to expand our slate of athletic programs," says Ted Blake, director of athletics at the Prescott Campus.



Eric Fundalewicz

The campus hopes to add a women's basketball program in the near future. In fall 2013, women's softball and men's and women's cross-country programs were launched. A multimillion-dollar building renovation that began this past spring will create new locker rooms, training facilities and a volleyball-specific venue.

—Mary Van Buren

NEW BOARD MEMBERS GIVE EMBRY-RIDDLE ALUMNI A MAJORITY



Embry-Riddle's Board of Trustees recently elected four new members to help shape the future of the university. Two of these new members are Embry-Riddle graduates, giving alumni a one-seat majority on the 15-member board. The board's first-ever alumnus chairman, Mori Hosseini (HonDoc '13; '78, '79, '82, DB), was inducted in January.

"We're excited to welcome these new trustees with their wide variety of experience and solid records of leadership in their industries and communities," says Embry-Riddle President and CEO John P. Johnson.

Dr. Charles D. "Chuck" Duva is the president and CEO of DuvaSawko, a medical coding, billing, accounts receivable management and software development company. He is also a chief officer of two other Florida-based healthcare companies. He previously practiced emergency medicine for 20 years, and was co-founder and vice president

of Fish Memorial Hospital in Deland, Fla. Prior to joining the board, Duva and his wife, Beth, established an endowed fellowship at Embry-Riddle in 2013 in support of the Ph.D. in Aerospace Engineering.

C. Jeffrey "Jeff" Knittel ('80, DB) is the president of CIT Transportation Finance. Knittel began his career with Cessna Finance Corporation. He earned a bachelor's degree in aviation management from Embry-Riddle and completed the advanced management program of the Wharton School of the University of Pennsylvania. Knittel and his wife, Kathy, are longtime Embry-Riddle supporters; in 2002, they created an endowed book fund to help defer the cost of textbooks for qualified students.

David B. O'Maley is chairman emeritus and former president and CEO of the Ohio National Life Insurance Company, where he held various executive positions from 1992 until his retirement in

From left: Dr. Charles D. 'Chuck' Duva, C. Jeffrey 'Jeff' Knittel, David B. O'Maley and Jon W. Slangerup

2012. He is the founder and volunteer chairman of the Tri-State Warbird Museum in Batavia, Ohio, one of the largest collections of flyable World War II aircraft in the world. He and his wife, Karen, established the O'Maley Family Endowed Scholarship at Embry-Riddle in 2013.

Jon W. Slangerup ('81, WW) is the CEO for the Port of Long Beach, Calif., a primary gateway for trans-Pacific trade valued at more than \$180 billion annually. Slangerup graduated cum laude from Embry-Riddle with a bachelor's degree in professional aeronautics and earned a master's degree in business administration from Kennedy-Western University. Prior to his current role, he enjoyed a 20-year career with FedEx, where he advanced through the ranks to become president of FedEx Canada.

—Mary Van Buren

Worldwide Campus Launches M.S. in Unmanned Systems

Starting this summer, students can pursue a Master of Science in Unmanned Systems through Embry-Riddle's Worldwide Campus. Coursework will examine the application, development, management and policies of unmanned systems.

"Interest in the unmanned systems industry

is growing at an incredible rate," says Brent Terwilliger ('00, DB; '05, WW), program chair and assistant professor of aeronautics. "This work is complex, and organizations will be looking for employees with specialized education and training in the years to come. The Master of Science in Unmanned Systems will challenge students to seek innovative solutions to issues in this developing field."

For more information on the Master of Science in Unmanned Systems, visit www.worldwide.erau.edu/unmanned.

—Molly Justice

BY THE NUMBERS

Return on Investment

No. 1 rankings of Embry-Riddle's Prescott and Daytona Beach campuses in their respective states for Return on Educational Investment*

■ Prescott Campus
■ Daytona Beach Campus

Estimated 20-year net return on investment

\$606,200
\$535,700

Estimated annual percentage ROI

7.5%
7.0%

National rankings out of 1,312 colleges and universities

#35 #64
Prescott Campus Daytona Beach Campus

*BASED ON 20-YEAR NET ROI
Source: 2014 PayScale College ROI Report

ALTIMETER (CONTINUED)

Daytona Beach Campus College of Aviation Dean **Tim Brady** was honored with the university's Pinnacle Award.

The **Daytona Beach College of Business** was awarded the Air Transport Research Society's Airport Benchmarking Study to examine performance factors at airports around the world.

The **Daytona Beach men's and women's tennis** programs both finished runner-up at the NAIA National Championships.

At the 2014 Southern California Invitational Drill Meet, the **Prescott Air Force ROTC Rifle Team** finished in first place in the full team event; the **Color Guard** placed second; and **Cadet Christopher Vaughn** won the Individual Drill Down, besting approximately 60 cadets from all over the nation.

FEEDBACK

FROM THE EDITOR

Thank you to all who responded this spring to the *Lift* Readership Survey, emailed to 7,225 randomly selected readers. For the most part, you told us we're doing our job well. Interestingly, despite the digital world in which we live, *Lift* is the No. 1 source of university information for our readers, and 62 percent prefer the print version over the website/electronic edition.

Lift is getting some wear, too: 38 percent of you indicated you keep your copy for more than one month and 51 percent spend 30 minutes or more with each issue.

As far as interests go, the largest number of you ranked articles about science, technology and engineering as most appealing. We hope you enjoy this edition's topical look at unmanned and autonomous systems!

Of course, there's always room for improvement. Don't wait for the next survey to tell us how we're doing. We value your opinions and suggestions. To see more survey results, visit www.alumni.erau.edu/Liftsurvey.

— SARA WITHROW, EDITOR

The Cream of Aviation

What an honor to receive a magazine highlighting the "Personification of Aviation in America." The spring issue alone [The Alumni Effect], points out not only the cream of the crop of Embry-Riddle, but of aviation in America. Limiting comments to America might be shortsighted. The cream comes from all over the world.

I spent three days this past spring at an unmanned aircraft systems workshop conducted at Embry-Riddle's Daytona Beach Campus. The campus was breathtaking. The instruction, headed by Professor Alex Mirot, was outstanding. Sarah Ochs, director of professional programs for the College of Aviation, did a marvelous job organizing the entire week. The list of students included aviation professionals from every conceivable aspect of the industry. Again, the cream of aviation's crop from all over the world are attracted to Embry-Riddle.

Paul G. Larish ('73, '83, DB)

B.S. Aeronautical Studies; MBA-Aviation

Two Exceptional Leaders

It's probably no coincidence that after having spent 40 years in the U.S. Air Force (and still on active duty), I have had the privilege of serving under two general officers highlighted in the spring 2014 issue of *Lift*.

Maj. Gen. Tom Trask ('84, PC) ["Prescott Alumni Inducted into Hall of Fame"] was not only a classmate of mine in 1982 at the Prescott Campus, but he went on to be the Air Force Special Operations Command's 23rd Air Force Commander in 2008. Here I had the opportunity to serve under him—26 years after graduating from Embry-Riddle.

Lt. Gen. Russell Handy ('82, DB) ["Class Notes"] graduated the same year I did and went on to be the Pacific Air Forces' director of operations, where I served under him for a year and a half. He is another stellar general officer.

Both gentlemen truly represent the best of Embry-Riddle. My only notoriety is that I'm the oldest enlisted man serving in the Air Force today—which has afforded me

the opportunity to work with some exceptional leaders.

Chief Master Sgt. Paul K. Koester
('82, PC; '87, WW)

B.S. Aeronautical Studies;
M.S. Aeronautical Science

EDITOR'S NOTE: *Trask* was promoted to lieutenant general in June. In 2013, he was named to the Prescott Chancellor's Alumni Hall of Fame.

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.

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Daytona Beach, FL 32114





What Does E-R-A-U Mean to You?

BY WES OLESZEWSKI ('87, DB)

What does Embry-Riddle Aeronautical University mean to me? "Everything."

To fully understand my answer you need to know a little about my background. I was born and raised on the wrong side of a highly industrial city, Saginaw, Mich. Where I come from you are born, you grow up and maybe graduate from high school, and then you go to work for General Motors or some other outlet supporting the auto industry. Yet, I was a die-hard space buff and I wanted to fly. Embry-Riddle was the first and only university that I applied to, and they accepted me.

I arrived at the Daytona Beach Campus on Aug. 28, 1977. Looking around the campus, I said to myself, "There are only two ways I am going to leave—either with my degree in Aeronautical Science and all of my ratings, or in a lot of little Ziploc bags." I was just one of 2,500 freshmen to arrive that week. By Christmas break about 75 percent of those freshmen had dropped out. I was not among them.

Of course the folks back home gleefully watched as I ran out of money and began the process of "working my way through" the university that I truly could not afford. I would be in for one trimester and out for two, in for another and out for a year, all the while working whatever job I could find and sending my earnings to the university bursar. By the time I graduated, I had worked a total of 14 different jobs from rental car hiker to Kmart clerk to Falcon Jet mechanic working under the shop certificate.

I walked across the stage at graduation on a humid August morning in 1987, just a few days short of a full decade from the day I started. Along the way, I gained much more than a degree. I met most of the friends that I treasure to this day, including a few fellow



From top: Wes Oleszewski celebrates his graduation from Embry-Riddle; he and wife Teresa, moments after meeting in 1984 at an *Avion* party; and the couple's 1988 wedding at the Daytona Beach Campus.

pilots from the ERAU Flight Team, some of whom were nice enough to elect me as the team's chief pilot in 1985, the year we all went to regionals and put the first NIFA trophy in the Daytona Beach Campus' case. As a cartoonist and member of the *Avion* newspaper staff, I found my alter ego, Klyde Morris, the only ant in aviation. Through Klyde I also became pals with then-university President Jack Hunt, who invited me to simply drop in at his office "anytime and just talk," which I did. Most significant of my pals at Embry-Riddle, however, was the guy who could sit and tell stories with zero assumption of formality—Embry-Riddle's co-founder, John Paul Riddle.

Of course my greatest gain from Embry-Riddle is my wife of 25 years, Teresa ('88, DB). We were married on campus during Homecoming 1988 and John Paul Riddle attended our wedding.

Today, I look at my life and I see completing my Embry-Riddle degree as my single greatest accomplishment. I did it myself, I paid for it myself, and as I went down that path I found that it was, like most things in life, not me against the university—it was me against me.

When I came into my darkest moment at the school, Embry-Riddle reached out and the people there recognized what I had earned and propelled me forward. Along the way to graduation, I got everything that makes me the person that I am today. Thus, my answer to the question of "What does E-R-A-U mean to you?" is "Everything," and it will always be that way. 🐛

EDITOR'S NOTE: Oleszewski earned a Bachelor of Science in Aeronautical Science from Embry-Riddle. He is a spaceflight analyst for Aero-News Network, an author, a cartoonist, and owner/operator of Dr. Zooch Rockets, a model rocket company. He is also a former airline captain.

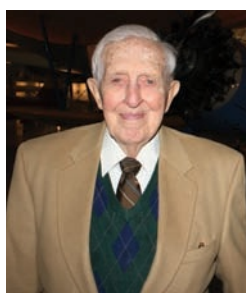
SEND US YOUR STORY *In Other Words* gives you the opportunity to share your industry-related or personal perspective with *Lift* readers. Email submissions/proposals to liftmag@erau.edu.



War Bird

The storied military career
of **H. Kurtz Weiser** started at
Embry-Riddle's Carlstrom Field

BY SARA WITHROW



H. Kurtz Weiser

When the United States entered World War II, H. Kurtz Weiser ('42, MC, Non-degree) wanted to serve his country from the air, not the ground. The \$500 bonus for every year of wartime service in the Army Air Forces' Aviation Cadet Program was also appealing, but he didn't know if he could get in. He'd failed the entry exam two years earlier.

But with passion substituting for confidence, he boarded a train to Pittsburgh and took the test again. "I just took the exam and they said, 'You passed Mr. Weiser, raise your right hand,' and they swore me in."

It was February 1942, just two months after the attack on Pearl Harbor. "I was excited," he says of becoming an aviation cadet. "I always wanted to fly."

And fly he did. Weiser went on to pilot 24 different aircraft, serving in the Air Transport Command's (ATC) 3rd Ferrying Group based in Michigan and in the China-Burma-India (CBI) Theater flying the hump, a treacherous 530-mile route over the Himalayan Mountains. He separated from the Army Air Forces in February 1946, just long enough to collect his war-time bonus for 51 months of active duty. Accepting a commission as captain in the newly established U.S. Air Force in 1947, he was assigned to Pope Field, N.C., where he flew P-51 reconnaissance planes and served as an AT-6 instrument instructor. Receiving orders to Alaska in 1949, he resigned and joined the Air Force Reserve, finally retiring as a major in 1977.

Flight Training

Weiser's lofty career all started at Embry-Riddle. Following a preflight program at Maxwell Field, Ala., he boarded a train for Arcadia, Fla., and Embry-Riddle's Carlstrom Field. John Paul Riddle, Embry-Riddle's founder and president, had secured a contract with the U.S. War Department in 1940 to provide primary flight instruction under the name of Riddle Aeronautical Institute (RAI). One of 64 civilian-operated pilot training airfields for the military, Riddle rebuilt the old World War I base, where he learned to fly in the 1920s, into a home away from home for the cadets.

"It was beautiful," Weiser says. "There was a swimming pool and they fed us very good. All of our meals were served with covers. Embry-Riddle was top of the line, but you still had to fly."

The washout rate was high at Carlstrom Field, hovering above 30 percent. "If you didn't cut the mustard, out you went," Weiser says. "They washed them out for a hundred different reasons." And

the instructors, private contractors hired by RAI, demanded perfection.

"Everything had to be done precisely the way it should be," Weiser says. "The instructor would say, 'Give me a three-turn spin.' You'd look at your compass and say your heading was 250; when you came out of your third turn you had to be at 250, not 252, not 254. They really taught you to fly."

Weiser's biggest thrill at Carlstrom Field was his first solo. "My instructor used to say, 'When you get

nervous, wiggle your toes and it will help you relax'—and I sure did."

Near Misses

Weiser's service was riddled with good luck. He was shot at while flying the hump, but the self-sealing fuel tanks on the C-47 he was piloting saved the day and he ended up with a Bronze Star. "We got hit 12 times, but we didn't

get any in the cockpit," he says. Earlier in his career, he crash landed a P-39, one of 30 such aircraft that he transported from Bell Aircraft in New York to Montana, en route to Russia. "I ended up with only a cut finger," he says.

One time during his 40 hours of combat flight in CBI, he awoke to find that the co-pilot had forgotten to turn on the carburetor heat when the fuel flow gauges started to fluctuate, a necessity in the high altitudes. "I woke up and there wasn't any sound," he says. "Ice in the carburetor had killed both of the C-46's engines." Weiser eventually got both engines running again.

A favorite pastime was flying over his wife Evelyn's home in Pennsylvania during his ATC service. "I buzzed her seven different times," he says.

Weiser says he was never fearful during any of his airtime adventures, but a close encounter one night with a tiger in India left him breathless. "I thought I was going to die. I was never so scared before, during or since in my life," he says.

Flight Legacy

Weiser passed his love of aviation to his son, Greg ('72, DB), who in 1969 enrolled at his father's alma mater. He completed his advanced flight ratings and earned a bachelor's degree in aeronautical science from Embry-Riddle in 1972, followed by an airframe and powerplant certification and degree in aviation maintenance management in 1973. "Flying opened up a whole new world for me," says Greg, who became a corporate pilot and eventually opened his own aviation parts business, which he sold in 2003.

His father can relate. Now 97, Weiser says the important thing in piloting, and life in general, is to push the fear of failure aside. "If you're afraid of failing, you'll never amount to a hill of beans." 🐦

Far left, a file photo of Army Air Forces cadets at Carlstrom Field, circa 1940s; top, H. Kurtz Weiser squats on the wing of a P-39 during his service for the Air Transport Command; and bottom, Weiser, forefront, perches on the edge of the swimming pool at Carlstrom Field during a relay race.

CARLSTROM FIELD

By the Numbers

32

classes of U.S. Army Air Forces cadets

8

classes of Royal Air Force cadets

7,500

cadets graduated

26–34%

washout rate

550,000

total flight hours logged

18

in the opening fleet of Stearman PT-17s; 185 aircraft by July 1943

1

fatality

\$1 million

cost of construction

\$1 million

estimated cost savings in training expenses for the U.S. military

To note:

The Aeronautical Training Society honored Carlstrom Field for having the top safety record out of 56 schools. Following its closure in 1945, the property was eventually divided, with one-half becoming a mental health institution and the other half a high-security prison.

SOURCE: *Craft*, Stephen, G., *Embry-Riddle at War*, University Press of Florida, 2009.

MYSTERY HISTORY CONTEST

What is the first name of Embry-Riddle's co-founder, T. Higbee Embry, pictured here?

Hint: It starts with a T.



Are you an Embry-Riddle history buff?

Then here's your chance to show us your stuff! Enter our Mystery History Contest for a chance to win a copy of *Forever an Eagle*, a pictorial history of Embry-Riddle Aeronautical University and a stainless steel, etched Embry-Riddle Alumni keychain.

TO WIN: Search the University Archives online (www.alumni.erau.edu/archives) for the correct answer. Send your answer to the email address on the archives webpage and your correct response will be entered into a random drawing held after Sept. 30.

Thomas "Sid" Mann ('61, MC) of Florida is the winner of the spring 2014 Mystery History Contest. Mann correctly identified Isabel McKay as the first and only female president in Embry-Riddle history. In submitting his response, he noted that President McKay signed his diploma from the Embry-Riddle Aeronautical Institute in Miami in October 1961.

"She requested that I and a classmate report to her penthouse in the Aviation building just prior to graduation, so she might make us aware of her displeasure regarding our hoisting a dummy atop the flagpole in the front of the building as a prank. Luckily, she accepted our apology and we were allowed to graduate as A&P technicians," Mann says.

Embry-Riddle's University Archives department is dedicated to preserving the memories and artifacts belonging to the university's rich history.

Explore Embry-Riddle's past at www.alumni.erau.edu/archives.

BY SARA WITHROW

As a child living in the Costello Housing Scheme in La Penitence, a suburb of Georgetown, Guyana, Beverley Drake ('77, DB, Flight Training; '02, '05, WW) never thought she'd fulfill her father's dream of becoming a pilot, live and work in America, or serve as a "roving" ambassador for Guyana. But she did, and along the way she became a trailblazer for women and minorities in aviation.

On Oct. 9, 2013, as part of Guyana's 100th anniversary of flight, the government stamped their approval, literally, on Drake's pioneering achievements by issuing local and international postage stamps bearing her image. The stamps commemorate Drake as the first woman to fly for the Guyanese Defence Force (1977) and as the first female commercial pilot for Guyana Airways (1978).

"I'm proud to be honored on a stamp," says Drake, who was recently promoted from senior aviation accident investigator/analyst at the National Transportation Safety Board (NTSB) to program manager with oversight of forums and symposiums. She is also the NTSB Federal Women's Program manager. "The Guyanese Postmaster likened it to being a roving ambassador, because now you have a stamp that will be used regionally and internationally, so I will be all over the world."

Drake has broken barriers in the United States, also. As the first and only black woman to serve as a senior aviation accident investigator at the NTSB, she has examined



Stamp of Success



Beverley Drake ('77, DB, Flight Training; '02, '05, WW) is an ambassador for women, minorities, her native country of Guyana and aviation safety

more than 300 accidents. A tireless advocate for science, technology, engineering and mathematics education for young women and minorities, Drake received the NTSB's Equal Employment Opportunity Diversity and Inclusion Award in April. In 2013, Embry-Riddle honored Drake with its Alumni Achievement Award for her exceptional commitment to the aviation and aerospace industry.

Opportunity Knocks

A self-described tomboy, Drake grew up building model airplanes with her dad and playing cricket with the neighborhood boys. Her father had a subscription to *Aircraft of the World* and would take Drake to the airport to watch planes. "My Dad always wanted to be a pilot and I gravitated toward that, too," she says.

So when Guyana sought women pilots for its military flight program, Drake, thanks to a Guyanese scholarship to flight school at Embry-Riddle, abandoned her pre-med studies at the local university and boarded an airplane to America with 11 other Guyanese pilot hopefuls.

Just 10 days after starting her flight program, Drake received a life-changing phone call. Her mother, who was hospitalized with an illness, had passed away unexpectedly. Others might have given up and returned home, but for Drake the news was a rallying cry. "I vowed then to work extra hard to make my dad proud. I told myself, I've got to live my dad's dream; I've got to be a pilot," she says.

Given her resolve, Drake's first cross-country solo experience was all the more devastating. During the first of three landings, Drake navigated too close to a transmission pole and struck the right wing tip of her aircraft. Receiving a replacement plane, on the next leg of her flight she got lost.

"I flew off my map," she says. Eyeing an airstrip in the distance, Drake entered the traffic pattern and landed her Cessna 172 at the Orlando Jet Port. "All that comes in there are jets. A car met me when I landed and the driver said, 'The guys in the tower would like to talk to you.'"

Ironically, the future NTSB investigator/analyst became the subject of a Federal Aviation Administration (FAA) investigation. "I was grounded for two weeks," she says. "I felt really bad, but it was a good learning experience." She went on to fly the Britten-Norman Islander for the Guyanese Defence Force and the Twin Otter and Hawker Siddley 748 for Guyana Airways Corporation, with no further incidents.

'Where Did She Come From?'

Flying supply missions for the Defence Force, Drake came face to face with the male-dominated field she'd

entered. "They were used to seeing men in the cockpit, then one day a woman shows up, and they're like, 'Where did she come from?'" she says. After only six months in the military, Drake was transferred to the government-owned Guyana Airways Corporation, where she flew local routes and internationally to Trinidad, Barbados and Dominica.

In 1980, Drake immigrated to the United States and became an analyst at Goldman Sachs in New York City. To keep her piloting skills current, she joined the Black Pilots of New York flight club, where she met fellow Embry-Riddle alumnus Dennis Jones ('80, DB), senior air safety investigator for the NTSB's Major Accident Investigation Division, who served as a guest speaker at a club event. Impressed by her aviation experience and eagerness to further her aviation career, he encouraged her to apply for a junior investigator position with the agency. She was hired in July 1991.

"Beverley has demonstrated a tenacious work ethic marked by indefatigable and assiduous efforts," Jones says. "Moreover, Beverley's superb interpersonal relationship skills in her interaction with not only a diverse workforce, but also the greater public that the agency serves, her professionalism and accomplishments have made her an exemplary role model for not only women and minorities, but also an inspiration for all those who strive to overcome the challenges along the road to success."

Single-Parent Success

While her work at the NTSB frequently took her away from her two sons, Kurt, now 31, and Kevin, 35, whom she raised since 1994 as a single parent, Drake says it was tremendously rewarding. "The payoff for being an investigator is that you can make a difference. When the NTSB Board makes recommendations to the FAA resulting from an investigation that you conducted as investigator-in-charge, and you know that those recommendations will prevent accidents, you feel good," she says.

Drake attributes her success to the people who supported her throughout her life, starting with her parents, who taught her to work hard, respect others and be persistent. "Winston Churchill said over and over, never, never, never give up. That's my theme, never give up." 🌟

"Winston Churchill said over and over, never, never, never give up. That's my theme, never give up."

Facing page, Beverley Drake at Embry-Riddle's 2013 Alumni Awards Dinner; left, Drake accepts the Equal Employment Opportunity Diversity and Inclusion Award from NTSB Member Robert Sumwalt for her efforts to support STEM education for young women and minorities.



AIR SUPPORT

An Embry-Riddle UAS team brings hope to storm-ravaged Philippines

BY LAURIE DAVIES



Nearly two months after Super Typhoon Haiyan ravaged the central Philippines—after news cameras were gone and Haiyan's force was a footnote in the 2013 storm cycle—aid had still not reached hard-hit, remote villages.

With two Lynx unmanned aircraft systems (UAS) in tow, two unofficial Embry-Riddle ambassadors brought fresh hope.

At the request of a non-governmental organization operating in the Philippines, Stephen Rayleigh ('13, PC), a part-time adjunct professor, who as a student spearheaded the formation of the UAS minor at the Prescott Campus, and

UAS student Michael du Breuil ('15, PC) traveled to the Philippines in late December to help with disaster mapping. "It was a once-in-an-education type of experience," says Rayleigh.

Mission Cebu

Rayleigh and du Breuil took two UAS planes developed for intercollegiate competition by their student group Team Awesome to the Filipino Province of Cebu, a collection of more than 150 islands. Their job was to document with aerial photos the damage caused by Typhoon Haiyan (known as Typhoon Yolanda in the Philippines).



Facing page, Michael du Breuil launches the Lynx UAS in the Filipino Province of Cebu to photograph the storm's destruction; left, the super typhoon devastated entire villages; below, du Breuil, standing, and Stephen Rayleigh, kneeling, gather with a group of Filipino children following a day's work near their village.



"We were supposed to go to remote villages that had not received aid. Government assessors were scared to go into these areas for fear of riots and danger," Rayleigh says.

"Not only were we determining whether aid was needed, but also whether certain areas were even reachable," du Breuil says.

Durable Design

With portable, snap-together design and durable, Kevlar construction, the team's 4-foot UAS can be launched by hand, while a 45-degree tilt on the horizontal stabilizer allows it to stall to the ground like a

parachute for landing. "The plane can take a great deal of abuse," Rayleigh says.

A safety pilot flies the aircraft like a normal radio control airplane for takeoff. After takeoff, controls are offloaded to a GPS-guided autopilot while mirrorless Micro Four Thirds cameras take photos at regular intervals along a grid-based flight pattern.

Real-Time Results

The team met fresh skepticism at each new village, yet once their Filipino guide explained the purpose, the villagers were won over. "The places the government was the most scared to go—those were the



Typhoon Haiyan's Toll in the Philippines

4.1 million people displaced

1.1 billion kilograms of crops lost (73% of coconut crop area; 16% of rice crop area; and 4% of corn crop area)

16 million people affected

600,000 hectares of farmland devastated

The Lynx UAS photographed approximately 22 square kilometers of damaged homes and property. The photos were used to construct 3-D maps of the typhoon's destruction. Right, Stephen Rayleigh describes the Lynx's operating capabilities to members of the Philippine Air Force to attain airspace operations approval.



places that were happiest to see us," du Breuil says.

"Interestingly, in rural areas, people were helping themselves the most," he adds. "Metro areas still had rubble strewn all over the roads. Rural villagers weren't sitting around waiting for aid."

But they needed aid, which was clearly evident from the 2,000 to 3,000 images captured with every UAS flight. By the end of their seven-day trip, the team had covered approximately 22 square kilometers and collected a staggering 100 gigabytes of data that would ultimately help construct 3-D maps to identify areas hit the hardest. The data was provided to the Red Cross, the Department of Social Welfare and Development, and the Philippine Air Force.

Future Possibilities

The trip gave Rayleigh and du Breuil an opportunity to test the humanitarian applications for UAS. "We're gaining leverage so that groups like ours will be able to deploy," Rayleigh says.



SOURCES: US AGENCY FOR INTERNATIONAL DEVELOPMENT, PHILIPPINES DEPARTMENT OF AGRICULTURE/FOOD AND AGRICULTURE ORGANIZATION

Meanwhile, the possibilities for UAS are not limited to disaster mapping. In 2013, the duo launched a business with fellow Embry-Riddle alumnus Matthew Lyon ('13, PC) called Swift Radioplanes, which provides high-resolution mapping services, in addition to the design, manufacture and commercial sale of UAS.

"This technology can do dull, dirty or dangerous jobs," Rayleigh says, citing missions such as resupplying military troops in Afghanistan or taking post-meltdown pictures of the Fukushima Daiichi Nuclear Power Plant in Japan. Rayleigh also views applications utilizing thermal cameras for live wild-fire response as a promising frontier.

From disaster response to military uses, Rayleigh predicts this new technology will gain traction. "If the goal is to quickly deliver enough information so someone can make a critical decision, UAS helps save time, money and possibly lives." ✨

BY LAND OR BY SEA

Students take the lead in unmanned and autonomous system technology

BY SARA WITHROW

Embry-Riddle students and faculty aren't only designing unmanned systems for the air; they're developing autonomous ground and surface vehicles as well.

In 2013, an Embry-Riddle team of mechanical engineering and engineering physics students at the Daytona Beach Campus tested a fully autonomous perimeter-patrol system at Daytona Beach International Airport. Believed to be the first use in the United States of a self-guiding ground vehicle for airport security, the Ford Escape Hybrid is equipped with a GrayMatter Autonomous Vehicle System employed GPS and a scanner with 64 lasers to identify its position and environment.

"The ground-patrol vehicle has tremendous commercial potential," says Charlie Reinholtz, professor and department chair for mechanical engineering. "There are thousands of airports and other facilities where autonomous robotic systems could be used to monitor the perimeter more effectively and efficiently than humans."



Hitesh Patel ('12, DB) tests the Embry-Riddle WAM-V at the Halifax River near Daytona Beach, Fla. The first unmanned boat to be registered in Florida, it will compete this fall in the Maritime RobotX Challenge in Singapore.

Making Waves

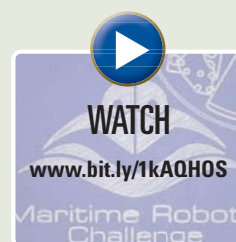
Also in 2013, Embry-Riddle's Daytona Beach Campus was first to register an unmanned boat in Florida. In October, a student and faculty team will take its 16-foot Wave Adaptive Modular Vessel to Singapore to compete in the inaugural Maritime RobotX Challenge, a competition co-sponsored by the Office of Naval Research (ONR), the Association for Unmanned Vehicle Systems International Foundation and Singapore's Ministry of Defence.

One of only 15 teams from five countries invited to develop an autonomous surface vehicle (ASV) for the challenge, Embry-Riddle's team has a chance to win \$100,000 and be invited by ONR to submit a proposal for continued development.

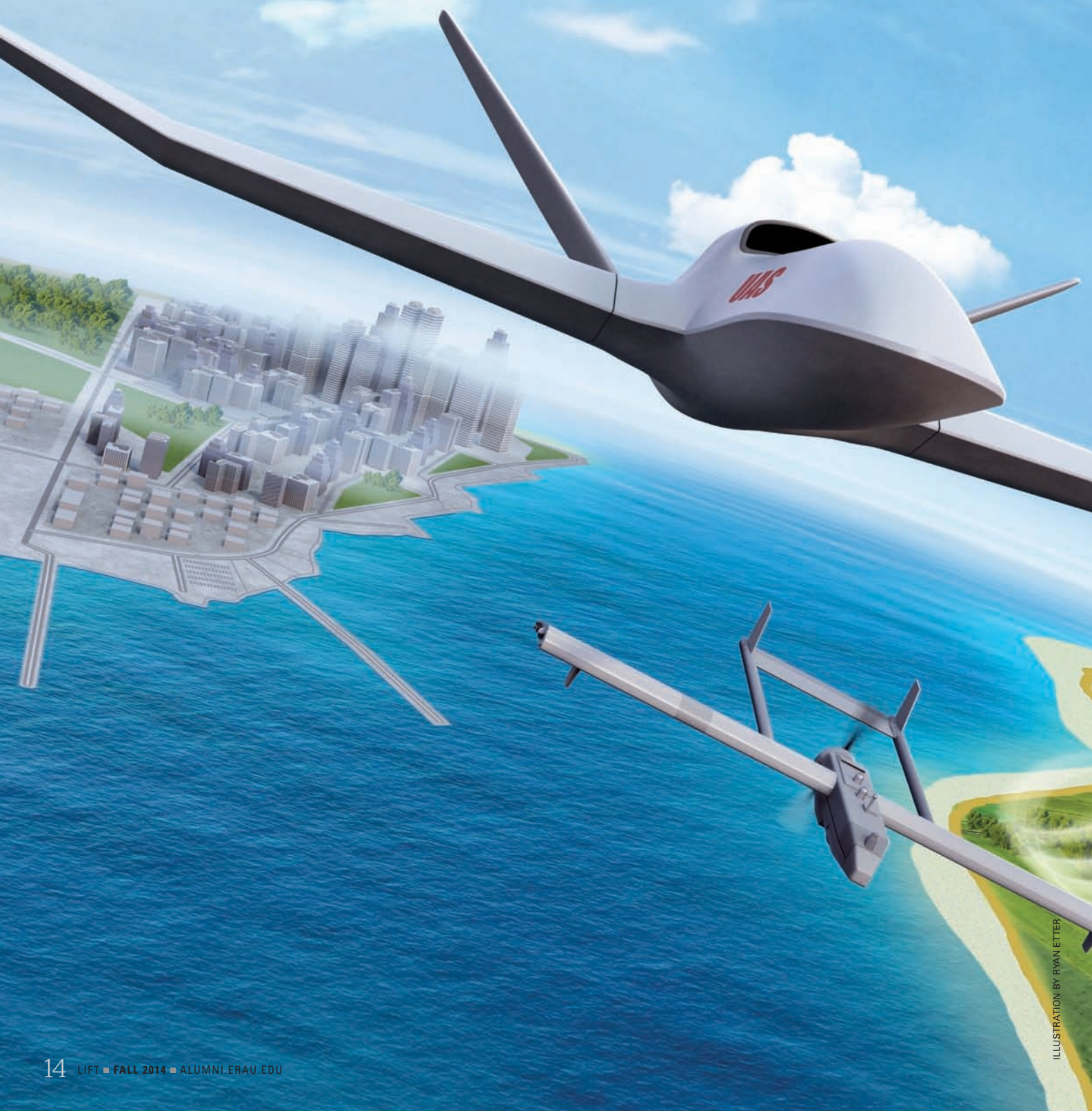
"The challenge will give the Office of Naval Research an assortment of technology that they can cherry pick from to develop further," says Reinholtz. "They could fund a large contract with a university following this competition, and we hope it will be us."

Graduate student Hitesh Patel ('12, DB), mechanical engineering project lead, sees many practical applications for the ASV, including looking for downed aircraft like Malaysia Airlines Flight 370, which disappeared over the Indian Ocean earlier this year. "It could do lake patrol, it could operate in high seas—the possibilities for this platform are limitless," he says.

To support Embry-Riddle in the Maritime RobotX Challenge, visit www.bit.ly/1tz5GRL.



ALL



AROUND US

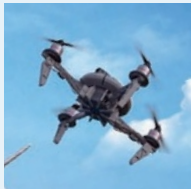
Unmanned aircraft systems are the next aviation evolution

Mike Ledermann ('08, DB) is a test pilot caught between two worlds: the emerging unmanned aircraft systems (UAS) industry and the age old tradition of flight via stick and rudder. While he thinks of himself as a "fly by the seat of your pants" kind of guy, he's one of a growing number of pilots getting paid to operate aircraft via a joystick and computer terminal.

"Sometimes I feel like I'm selling out traditional aviation," he says. "But unmanned systems are the next evolution for the industry and it's going to be huge. At a time when jobs are hard to come by, this is one sector that seems to be growing."

Fortunately, Ledermann's employer, Turin Aviation Group in Tampa, Fla., allows him time in the cockpit in addition to his UAS responsibilities. "They see the value of having active pilots working in the ground control center," he says. "I'm

BY SARA WITHROW AND MELANIE STAWICKI AZAM



UAS ECONOMIC IMPACT OUTLOOK: 2015-2025*

BY 2017:

\$13.6 Billion
in economic impact

70,000
jobs created:
34,000 in manufacturing
(avg. salary \$40,000)

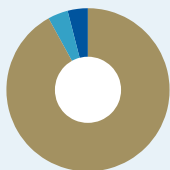
BY 2025:

\$82.1 Billion
in economic impact

103,776
jobs created

TOTAL IMPACT

2025, BY SECTOR



Agriculture \$75.6 Billion
Public Safety \$3.2 Billion
Other \$3.2 Billion

*Projections based on the publication of FAA regulations for commercial UAS operations.

SOURCE: *The Economic Impact of Unmanned Aircraft Systems Integration in the United States*, March 2013, co-authored by **Bijan Vasigh**, professor of economics and finance, Embry-Riddle Aeronautical University, and Darryl Jenkins, independent consultant, for the Association for Unmanned Vehicle Systems International

acting as an intermediary between these two different spheres of aviation. I'm trying to zip them up."

Ledermann is excited about the future of the UAS industry, which is set to boom commercially once the Federal Aviation Administration (FAA) approves guidelines and standards for operations in the national airspace (NAS), but says he worries about the impact of UAS on the existing aviation industry and society at large.

"It's a disruptive technology," he says. "There's a very real human problem that's on the horizon."

Ledermann isn't alone in his apprehension. The aviation community is abuzz over unmanned and autonomous aircraft and their potential applications. Concerns range from potential job displacement to airspace integration issues, military and law enforcement uses, and the protection of privacy. On the flip side, proponents, who include a number of commercial and research interests, can't say enough about the vast benefits the technology promises to deliver—and in some cases, is already delivering in other countries.



No Rules

One of the biggest challenges to the development of UAS in the United States is a lack of rules allowing for commercial operations. In 2012, Congress mandated the FAA develop a plan to safely integrate civil UAS into the NAS and establish operational and certification requirements for public use by 2015. Progress has been slow.

"We're hoping by November that the rules will be released, but to be honest it's been over four years since it was initially scheduled," says **Brent Terwilliger** ('00, DB; '05, WW), professor and program chair for the Master of Science in Unmanned Systems program at the Worldwide Campus. "We're going to miss out on the capabilities, benefits and advantages this technology can bring if we don't start to understand how it can best be leveraged."

Brent Bowen, professor and dean of the College of Aviation at the Prescott Campus, warns that some U.S. companies are not waiting for the FAA. "There's no question about it. U.S. companies are leaving to go [to] places like Mexico, Brazil, the Philippines and Japan to fly their devices. We are already behind."

Presently, only public entities can apply for an FAA Certificate of Authorization (COA) to operate UAS. The only other authorized users are hobbyists. Private organizations like Embry-Riddle must partner with a public entity with an approved COA in order to operate UAS. Other alternatives are to fly UAS through student clubs or test larger aircraft with a pilot in the cockpit.

"The FAA is taking its time," says **Richard Stansbury**, associate professor of computer engineering and computer science and coordinator of the Master of Science in Unmanned and Autonomous

Systems Engineering program at the Daytona Beach Campus. "People are really worried about privacy and safety. The worry is if it opens up too quickly and there is a major disaster, it could set the whole unmanned aircraft industry back."

"The liability is so huge. ... The first thing that leaps into my mind as an attorney is when a pilotless machine gets sucked into a Boeing 737's engine and everyone onboard is killed—who is going to be responsible?" says **Gregory "Sid" McGuirk**, a lawyer, an air traffic control specialist and an associate professor/associate department chair of applied aviation science at the Daytona Beach Campus.

With worst-case scenarios like McGuirk's on the public mind, change is sure to be sluggish. **Ryan Hartman** ('09, WW), senior vice president of Insitu programs, a business collaborating with the FAA William J. Hughes Technical Center, doesn't expect widespread regulations for commercial operations anytime soon. "The FAA is still very much in the information collection mode," he says. "The risk assessments that have to be done are very complicated. They're still years away in my opinion."

UAS on Patrol

While commercial and private entities await FAA regulations, the military has been successfully operating UAS for more than a decade now, particularly in the areas of intelligence, surveillance and reconnaissance. According to **Brig. Gen. Peter Gersten** ('96, WW), deputy director for Politico-Military Affairs (Western Hemisphere), Strategic Plans and Policy Directorate, Joint Staff, the

Pentagon, and former commander of the 432nd Remotely Piloted Aircraft (RPA) wing, the technology has proven invaluable.

"There are literally thousands of stories of soldiers who have personally thanked the airmen at the 432nd wing for saving their lives," he says.

In response to its success, the U.S. military's unmanned fleet has grown significantly and is projected to continue to expand. The Department of Defense projects the percentage of UAS in its fleet will grow from its current 25 percent to 70 percent by 2035, according to a 2013 John A. Volpe National Transportation Systems Center report.

U.S. Air Force **Lt. Gen. Thomas Trask** ('84, PC), a command pilot who is vice commander at Headquarters U.S. Special Operations Command in Washington, D.C., estimates almost half of the aircraft the Air Force is buying today are RPAs, the Air Force's preferred term for UAS.

But while RPA operations might impact the number of traditional fighter pilots, recently retired U.S. Air Force **Maj. Gen. Margaret Woodward** ('97, DB), a pilot who in 2011 commanded the joint coalition combat air campaign over Libya, doesn't expect RPAs

"Sometimes I feel like I'm selling out traditional aviation. But unmanned systems are the next evolution for the industry and it's going to be huge."

— MIKE LEDERMANN ('08, DB)

to replace them completely. "I honestly think there are certain things that our capabilities in unmanned systems are not going to be able to do, because there is too much that requires human eyes," she says.

Furthermore, Gersten doesn't see a drawdown in overall forces due to unmanned systems. "I think you'll see a rebalancing," he says. "You'll have a certain amount of requirements for your manned cockpits and you'll have a certain amount of requirements for your RPAs. As the requirements for each of those buckets go up and down, you'll see the pilots swap. Fusing them together to yield the desired military strategies outcome, that's what it's all about."

Commercial Pilot Fate

But what about the commercial sector? Will airline pilots be replaced by UAS? **Pat Anderson**, professor and director of the Eagle Flight Research Center at the Daytona Beach Campus, says it's effectively happened already. Today's airline pilot is a "systems manager," he says, overseeing fly-by-wire flight control technology and traffic collision avoidance systems that synchronize with an advanced autopilot. "The manual input required by pilots in a regular airplane now is minimal." And, with human error cited as the No. 1 cause of aircraft incidents, there's good reason for all of this automation.

But 30-year aviator **Leland "Chip" Shanle** ('93, WW), a retired Naval aviator/test pilot and current

airline pilot, says pilots are a necessity. "You still have to monitor the automation," he says. "Pilots are paid not for when things go well—but for when things don't go well, when automation fails."

Additionally, UAS might not be that lucrative for the airlines. "Unmanned aircraft systems cost a lot to operate. There's a lot of technology involved," says Shanle, who remotely piloted the Navy F-4 Phantom II and in 2012 coordinated and remotely piloted the



"The first thing that leaps into my mind as an attorney is when a pilotless machine gets sucked into a Boeing 737's engine and everyone onboard is killed—who is going to be responsible?" — GREGORY "SID" MCGUIRK

crash of a Boeing 727-212 converted into a UAS for a Discovery Channel documentary. "It's a very expensive system and you still have to have a pilot sitting in a room someplace. Is that cheaper than paying a guy \$160 an hour?"

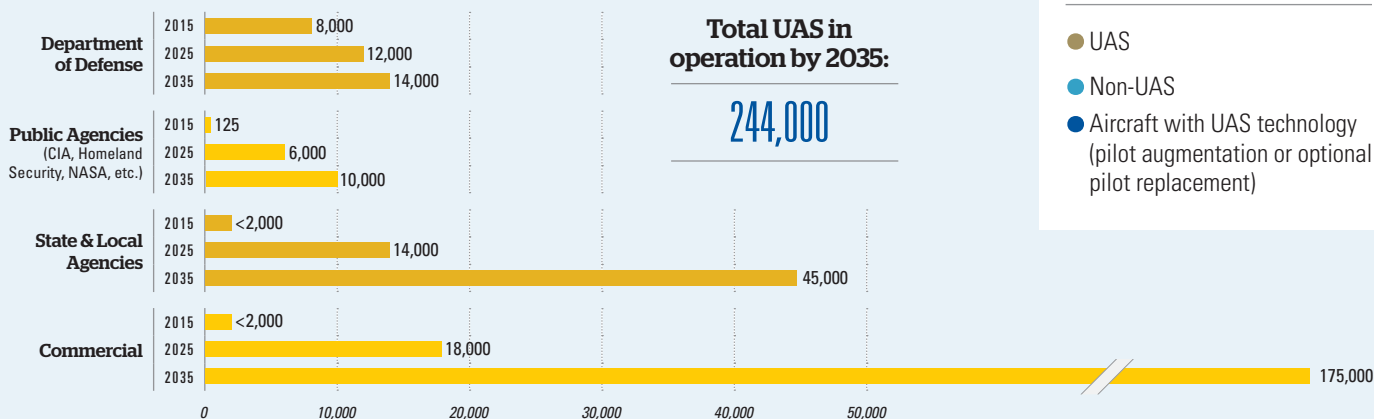
In lieu of removing pilots altogether, Terwilliger expects autonomous systems will continue to be enhanced. "Eventually we're going to transition to what they call optionally piloted aircraft," he says, which would combine the best of both worlds: a pilot onboard and a fully autonomous capability. "In a safety

UAS IN THE MILITARY

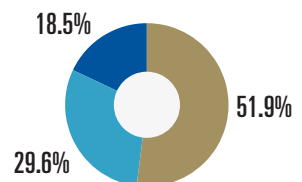
The Department of Defense (DOD) has been the front-runner in UAS development and implementation, and that trend will continue for the foreseeable future as UAS or UAS-equipped military aircraft are projected to dwarf non-UAS military aircraft in the DOD fleet.



Projected Number of UAS Vehicles in Operation, by Sector: 2015–2035



DOD Aircraft Inventory: 2035 Forecast



- UAS
- Non-UAS
- Aircraft with UAS technology (pilot augmentation or optional pilot replacement)

SOURCE: Unmanned Aircraft System (UAS) Service Demand 2015-2035 Technical Report, Version 0.1, September 2013, prepared for the U.S. Air Force by the John A. Volpe National Transportation Systems Center



EMBRY-RIDDLE: A UAS UNIVERSITY

When it comes to UAS, Embry-Riddle is ready for the challenge. Whether it is in training and operation, design/build, or integration into our airspace and economy, Embry-Riddle faculty and students are deeply engaged in providing talent and solutions for this burgeoning industry.

1 EDUCATION When UAS launches fully into the public and commercial sectors, Embry-Riddle graduates will be ready. In their UAS degree programs, design projects and competitions, Embry-Riddle students are designing the future of unmanned and autonomous systems. Aerial robots, autonomous airport-ground-patrol vehicles and watercraft are just a few of the projects producing winners in national and international competitions.

2 RESEARCH Embry-Riddle research runs the gamut from UAS flight research, to how UAS will integrate into our nation's airspace, to "outside the box" UAS designs like "octocopters," a versatile eight-propeller system with a wide range of applications, and "Dual-Aircraft Platform," two tethered autonomous aircraft that use wind shear like a kite surfer to travel continuously in the stratosphere to function as atmospheric satellites for communications and other uses.

3 LEADERSHIP From assessing the impact of UAS integration on the nation's economy to examining the impacts of UAS on the nation's airspace and at its airports, Embry-Riddle faculty are helping the nation and the industry navigate the challenges of UAS as a disruptive technology.



critical situation, say the pilot has a heart attack, an authorized external group could take control of the aircraft from the ground."

It may be decades before airline passengers will board an unmanned aircraft, but Terwilliger predicts it will happen one day. "Ask some of the folks who used to ride manned elevators and see what they think. Once you can show that the technology is capable and reliable, then public acceptance will start to grow," he says.

Revving the Economic Engine

Commercial pilots may not become obsolete, but UAS adoption could displace pilots in markets such as cargo transportation, surveillance and pesticide application.

"I think it will affect the fringe, guys towing banners and those tertiary type flying jobs," Shanle says.

Overall, the UAS industry is viewed more as an economic engine than a job eliminator. *The Economic Impact of Unmanned Aircraft Systems Integration in the United States* (2013), a report co-written by economist and professor of economics and finance at the Daytona Beach Campus **Bijan Vasigh** for the Association for Unmanned Vehicle Systems International, estimates 104,000 jobs will be created in the first 10 years after integration of UAS into the NAS and projects an \$82.1 billion economic impact by 2025.

"I absolutely believe there will be no impact on jobs except for positive impact," Vasigh says. And with

air transportation growing 5 percent annually at a global level and this growth projected for the next 20 years, demand for traditional pilots is, and will be, higher, he says.

Precision agriculture is an area expected to benefit immediately from the commercialization of UAS. Because most cropland is remotely located and UAS farming activities can be conducted at low altitudes, the consensus is that agriculture will be the first category the FAA will open up, says Anderson, who is working with a researcher at Embry-Riddle's Eagle Flight Research Center to develop an octocopter UAS for agricultural markets.

Other UAS applications expected to take off include firefighting, disaster response, surveillance and law enforcement. Hartman's employer Insitu, which is the first company to gain a commercial certification in the United States, is flying UAS on a restricted basis in the NAS north of Alaska, assisting with oil and gas exploration.

"We're operating in an area that enables us to be a pathfinder program for both this oil company and the FAA to better understand the tactics, techniques and procedures for operating an unmanned system in the national airspace," Hartman says.

Other large U.S.-based companies are investing in UAS technology as well, speculating on future markets and profits. Case in point: Facebook and Google recently purchased businesses that develop high-altitude UAS systems that could provide Internet access to remote areas of the world. **Bill Engblom**, professor of mechanical engineering at the Daytona Beach Campus, is developing a UAS design that could function similarly. He has one patent and is preparing a second patent application for a unique fixed wing, dual-aircraft platform UAS that would use wind shear to operate indefinitely in Earth's stratosphere.

"Your imagination is the limit for what UAS can be used for," Anderson says.



"I honestly think there are certain things that our capabilities in unmanned systems are not going to be able to do, because there is too much that requires human eyes."

— **RETIRED MAJ. GEN. MARGARET WOODWARD ('97, DB)**

paranoia is unfounded and that there is adequate case law related to surveillance from helicopters and remote cameras that can apply to UAS technologies, Stansbury acknowledges, "A helicopter hovering above you is something you can tell is there. These unmanned aircraft have the ability to blend in very well with the sky, especially because they're very small and very quiet."

Charlie Reinholtz, professor and department chair of mechanical engineering at the Daytona Beach Campus, says the privacy issue should be moot.

"I believe it's phones, not drones, that we need to be worried about," he says. He argues that privacy in America is largely an illusion, given the abundance of cellphone cameras and location services, as well as public video cameras monitoring everything from traffic to security.

UAS terrorism, however, is another story, Reinholtz says. "There are hobbyists that clearly have the ability to build an autonomous aircraft that can fly several miles and hit a target for less than \$1,000. And everything you need to do that can be purchased off the Internet and nobody is monitoring it. That's a pretty significant potential concern," he says.

For Arnaud, however, the larger ethical and societal implications of the technology are even more important. "Just because humans are flawed, doesn't mean we should hand it over to computers to do," she says. "We're avoiding the crux of the problem. Why don't we educate the human being, instead of finding technology to substitute us?"



MORE ABOUT UAS

Check out links to unmanned systems student project videos and updates on research sponsored by Embry-Riddle at www.alumni.erau.edu/UAS

Time to Think

Anke Arnaud, an ethicist and associate professor of management at the Daytona Beach Campus, maintains that waiting on the FAA isn't necessarily a bad thing, because it gives industry leaders time to consider the unintended consequences of the technology. An advocate of the precautionary principle, Arnaud supports careful consideration of any new technology that could adversely affect people and/or the environment.

She's not alone. There are plenty who worry about UAS use in law enforcement and its capability to invade personal privacy. "Recent public discourse on privacy being breached by the government has delayed public acceptance of UAS and fueled a sense of paranoia," Richard Stansbury says. And, while he believes the



"Ask some of the folks who used to ride manned elevators and see what they think. Once you can show that the technology is capable and reliable, then public acceptance will start to grow."

— **BRENT TERWILLIGER ('00, DB; '05, WW)**

Brave New World

Regardless, Reinholtz says there's no stopping it. "This is pervasive technology, whether it's unmanned autonomous aircraft or cars, it's really the same. It's starting to surround us and people have no idea.

It's here. It's coming. It's going to continue to come," he says. "[And] from a liability viewpoint, it's essential to make use of that technology. You can't ignore technology that's going to save lives."

Ledermann agrees, although as a pilot, he is somewhat disheartened at the thought of stick-and-rudder aviation going by the wayside. "You can't uninvent something once it's here," he says. Echoing Arnaud's concerns, he adds, "As more and more machines take over human tasks, we need to find something else for people to do. It's a brand new world." 🦋

A Higher Calling

In the midst of a successful career as an aerospace engineer at Lockheed Martin, a powerful conversion experience propelled **Patrick Kokorian** ('98, DB) on a different path



BY SARA WITHROW

DEVELOPING THE WHOLE PERSON

Embry-Riddle's Center for Faith and Spirituality at the Daytona Beach Campus and the Fred and Faye Haas Interfaith Chapel at the Prescott Campus are dedicated places where students can find space, resources and support to practice their faith and nurture their spirit. For more information or to support Embry-Riddle's interfaith programs, contact **steven.bobinsky@erau.edu**.

What do a monk, a graphic novel, aerospace engineering and a Catholic priest have in common? In a name: Patrick Kokorian ('98, DB).

Prompted by what Kokorian, a Lockheed Martin aerospace engineer, would characterize as divine intervention, he gave up his career, his friends and his possessions to take on an overwhelming job: saving the world and its people through prayer. In 2003, he entered a cloistered monastery. Four and a half years later, he took his final vows of poverty, chastity and obedience as a monk; and on Oct. 27, 2013, Kokorian was ordained a Catholic priest.

Earlier in 2013, his first full-length graphic novel, *The Truth Is Out There*, was published under the pseudonym, Amadeus. Like his medieval predecessors who tirelessly transcribed and illustrated Bibles to preserve God's word, Kokorian's "InstrucToon" integrates faith with artistic talent to bring the teachings of Jesus Christ to nonbelievers and Catholics who want to better understand their faith.

Perhaps inspired by Embry-Riddle's early history as an airmail carrier, the novel's two main characters, Brendan and Erc, make their living delivering mail, but, instead of flying a WACO, they use a rocket ship to transport cargo. In addition to incorporating Kokorian's penchant for aerospace, the book highlights his spiritual journey, including his Embry-Riddle experience. While he thrived in his classes, he says much of the time he battled loneliness—and the predominantly male population at the Daytona Beach Campus didn't help matters.

"The hole that I portray in the middle of Erc's chest at the end of chapter 2 was something I vividly experienced, when it felt like a cold wind was passing through my soul," he says.

Spiritual Journey

But there were positive experiences, too. It was at Embry-Riddle that Kokorian's doodling and sense of humor coalesced into his first comic strip: *Living on the Edge*, which was published weekly in the *Avion* student newspaper. He was also involved in the campus Catholic community and even portrayed Jesus

Champions for Eagle Athletics

Nick and Joan Spiroff make a planned gift to support Embry-Riddle Athletics

BY MELANIE STAWICKI AZAM

It has been more than a decade since Nick and Joan Spiroff first spotted a marquee sign advertising "Basketball Tonight" in front of Embry-Riddle's ICI Center, as they drove down Clyde Morris Boulevard.

The sign drew them in and now the basketball fans, Michigan retirees who winter in Ponce Inlet, Fla., are two of the Eagles' biggest and most faithful followers.

"We kept coming and coming and we started going in the university's fan van to the away games," Joan says. "We got hooked, and here we are."

In fact, the university and its athletics program has become such a passion for the couple, they recently decided to make a generous planned gift to Embry-Riddle's Athletics department. The funding will be earmarked for capital projects and scholarships for student athletes.

"We made our gift after what we saw here—we met a lot of nice people here and the students we encountered are friendly and respectful," Joan says. "The university stands for the best of the best."

Similar Values

Embry-Riddle has become a kind of second home for the couple. From the Detroit area, the Spiroffs

GIVING A GIFT

Thinking of supporting students with a planned gift to Embry-Riddle? Contact Kathleen Hennessy, director of gift planning, at **386-226-6026** or email: **kathleen.hennessy@erau.edu**.





TONY GIESE PHOTOGRAPHY

both retired after long careers at Ford Motor Company. Over the years, they have become regulars at the games and have forged friendships with university employees, like Maryellen Wynn, the business manager for the athletics department, who got to know the couple early on and gave them tickets for the fan zone.

"We like basketball and we like Coach [Steve] Ridder," Nick says. "He's just a great inspiration to his players."

Nick says he appreciates the fact that they share

similar values, like a good work ethic, and that Ridder, who came to the university 25 years ago, started the team with practically nothing and worked hard to grow it into what it is today.

"We want the students to excel the best they can."

— JOAN SPIROFF

The Spiroffs were also impressed by Embry-Riddle's faculty, staff and administrators, who took the time to meet with them and show them the campus, beyond just the basketball court. The couple even got the chance to experience a discovery flight on one of Embry-Riddle's Cessna 172 training aircraft.

"All the professors and everyone, they just greet you with such warmth and passion," Nick says. In addition to the planned gift, the Spiroffs also funded a term and endowed scholarship for men's basketball student athletes. That more immediate donation allows the couple to start helping students now and gives them the opportunity to meet some of the beneficiaries of their gift.

"We want the students to excel the best they can," Joan says.

The Gift of Education

Nick says he'd love to see Embry-Riddle's basketball team win the championship next year. The team finished its 2013-14 season with a 24-8 overall record, including its 14th trip to the National Association of Intercollegiate Athletics Division II National Championship. But more important, Nick hopes his gift will make an even bigger, lasting difference in the lives of Embry-Riddle students.

"We're hoping whoever gets the funds here applies it to educating themselves," he says. "We'd like to see some good citizens come out of this." 🐦

EDITOR'S NOTE: Embry-Riddle's Daytona Beach Athletics program was accepted into the NCAA Division II Sunshine State Conference membership process in July. Achieving full NCAA Division II membership takes three years typically. For status and information, visit www.erauathletics.com.

f Giving Just Got Easier!

Giving to Embry-Riddle is now on Facebook! Just visit www.facebook.com/GivingToEmbryRiddle.

“Embry-Riddle felt like a family. I benefited so much from mentors who I still call on for advice ... and in turn, that makes me want to inspire and support young people now.”

Sulton of Wings

James Sulton III ('03, PC; '05, DB) has given flight to the dreams of aspiring pilots since his student days

BY BOB COOPER

How many 18-year-olds do you know who would donate \$1,000 to their college's scholarship fund? James Sulton III ('03, PC; '05, DB) did just that as a Daytona Beach Campus freshman, and his generosity has only grown. While his own career (he now works at FAA headquarters) has accelerated at supersonic speed since earning degrees at Embry-Riddle and Pepperdine University (Ed.D.), his efforts to get kids excited about aviation energizes him the most. The foundation he's established, AviationEd, awards scholarships to deserving high schoolers attending Embry-Riddle Summer Academy camps and funds K-12 aviation-based education programs.

“He loved helping the kids study and taking them to the beach—some had never seen the ocean—during his summers as a student counselor and coordinator,” recalls Pam Peer, who continues to oversee Embry-Riddle summer programs as director of K-12

DARYL LABELLO

James Sulton III holds a small airplane-shaped clock given to him by his mother, also a pilot, at his high school graduation. The gift was meant to inspire him to reach for his dreams.

Education Outreach. "I think a lot of that came from his parents being so committed to his education." Sulton's father is a former community college executive director and higher-education executive, and his mother, an attorney, was the first African-American woman in Georgia to receive a private pilot's license.

"I lived near Oshkosh [Wis.], home of America's biggest air show, so that got me interested in aviation and my mom just fueled the fire," says Sulton. He decided he would become a pilot at age 8, started flying at 15, and set his sights on attending Embry-Riddle when he learned it was the leading aviation school.

The College Years

Sulton earned his B.S. in Aerospace Studies and M.S. in Aviation Education and Aviation Safety at the Daytona Beach Campus, finishing his final undergraduate semester in Prescott. It was during his Embry-Riddle years that Sulton met two people who would later help him get AviationEd off the ground—the organization he would co-launch that provides airfare, tuition, housing and bookstore vouchers to two to six Embry-Riddle Summer Academy campers each year. Enter Michael Campola ('04, DB), who became one of his best friends, and Jacqueline Roque, who would become his wife.

"When I had to take summer classes to finish my degree, I wasn't eligible to take out any more student loans," Campola says, "so I made the decision to ride it out on couches and car seats—whatever it took. That's when James let me stay at his apartment instead. He never asked for anything, just chess games and good conversation, because he knew that finishing my degree depended on his helping out. He's doing much the same thing for students through AviationEd—promoting education as a tool to bettering yourself."

Now an aerospace engineer at NASA's Goddard Space Flight Center in Maryland, Campola forges connections to the aerospace industry by sharing the cause with colleagues, and helps Sulton identify the most deserving applicants for the camp scholarships.

While spending the summer at his parents' home in Wisconsin after completing his undergraduate degree, Sulton met his future wife in a library at Marquette University, where she was a senior. They've teamed up ever since. They co-founded AviationEd in 2008, the same year they were married. "Jacqueline encouraged me throughout graduate school, even when I had to work as a campus security guard at Pepperdine, and she's an amazing life partner," Sulton says. Their partnership now includes parenting a young son and daughter who share their home in Manassas, Va.

Giving Back

Sulton is especially proud of his personal connection to Embry-Riddle through scholarship support over the last 14 years. He named the \$1,000 scholarship he donated as a freshman for his grandmother,

Esther Reed, who passed away that year. And for three years, AviationEd summer-camp scholarships went exclusively to students at Oakland Aviation High School in California, where he was the school's second principal while still in his 20s.

"My first job after completing my doctorate was as a flight service specialist for Lockheed Martin at Oakland Airport," he says. "I began tutoring kids on the side at Aviation High, which is located at the airport; when the principal left, the board asked me to step in. I already had a dream job, so to jump ship into the unknown of being a principal took a lot of soul searching. Looking back, I'm glad I did it. It was more stressful than being an air traffic controller, but seeing kids who were first in their families to graduate from high school—and headed to college—was one of the most touching moments I've experienced." All 40 students in the school's predominantly low-income first graduating class, which Sulton supervised, were accepted to colleges.

Wearing Many Hats

Sulton has worked for the Federal Aviation Administration (FAA) since 2010, currently as an air traffic control specialist in quality assurance at FAA Headquarters in Washington, D.C. Perhaps more impressive are the hats he wears off duty. With his wife, he's developed K-12 aviation curricula and visited D.C.-area schools for Where Dreams Take Flight, which promotes aviation education. For the D.C.-area chapter of the Experimental Aircraft Association, he coordinates events that put 500 kids in the air each year on 30-minute demonstration flights.

Through his foundation, Sulton organized the first Aviation Education Expo in March that gave kids hands-on experiences with a flight simulator and balloon rockets at Manassas Regional Airport. One lucky student was awarded a private pilot's license training package valued at \$8,000 by American Helicopters and Aviation. Oh, and if that's not enough, he teaches two online courses as an adjunct professor for Embry-Riddle's Worldwide Campus.

How he finds the time to also oversee AviationEd—which offers in-school, after-school and summer programs for kids in addition to Embry-Riddle Summer Academy scholarships—is a minor miracle. But it's the one hat he wears that he wouldn't consider tossing aside.

"Embry-Riddle felt like a family," he explains. "I benefited so much from mentors who I still call on for advice—instructors Marvin Smith and Nancy Parker are shining examples—and in turn, that makes me want to inspire and support young people now." 🌟

James Sulton III and his wife, Jacqueline, at the Aviation Education Expo.



ALUMNI NEWS

MESSAGE FROM THE ALUMNI ASSOCIATION

I am now convinced that Embry-Riddle must have somehow assisted with training Father Time because without question, time flies here and positive changes are continuing to happen at the *speed of thought*. I am proud to announce that ERAU Alumni now account for more than 50 percent of our board of trustees' membership. With the addition of Jeff Knittel ('80, DB) and Jon Slingerup ('81, WW) this past spring, we now have an alumni majority. Yes, ERAU Eagles are in command of your university. (See related article page 3.)

Since January 2014, your alumni team has held more than 50 network events, bringing over 2,500 alumni, friends and industry contacts together.

Across the nation and even in Singapore, we have provided the opportunity for Eagles to gather.

Additionally, the alumni website alumni.erau.edu is sporting a brand new look and new Web address. We hope you like our user-friendly design, which accents the strength and benefits of belonging to the ERAU Alumni Network.

**Please contact me
with your suggestions
at william.thompson@erau.edu.**

Remember the "E" in ERAU stands for "Engage." Please check our website for events in your area (alumni.erau.edu/events) and join in the fun. And, if you have an event you would like to plan, reach out to us to learn how we can assist.

Speaking of events, the events of the year—the biennial Wings & Waves Air Show/Alumni Homecoming Weekend (Oct. 8–12) in Daytona Beach, Fla., and Wings Out West/OctoberWest Alumni Homecoming Weekend (Oct. 2–4) in Prescott, Ariz., are just around the corner. Both will recognize the 40th anniversary of ROTC at Embry-Riddle, which started with the installation of Air Force ROTC Detachment 157 at the Daytona Beach Campus. Alumni from all branches (Air Force, Army, Navy/Marine Corps) of ROTC, regardless of campus affiliation, current military and veterans, including the Coast Guard, will be celebrated as our special guests.

In closing, I encourage you to take the controls from Father Time. Throttle back a bit and take the time to reconnect with your alma mater and your fellow ERAU Eagles. All of us look forward to your approach at a future ERAU gathering.

Forever an Eagle!

Bill Thompson ('87, PC)
Executive Director




CHECK OUT THE ALUMNI APP

Looking for an Embry-Riddle Alumni event in your area? We've got an app for that—and so much more, and it's free! Search for "Embry-Riddle Aeronautical University" in the App Store (DUBLABS version) and select the "Alumni Association" tab after downloading.

 www.facebook.com/ERAUAlumni

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 Search Embry-Riddle Aeronautical University Official Alumni Group

 Join the Eagle Network:
alumni.erau.edu/join

 www.flickr.com/photos/eraualumni

Soaring Eagles

From east to west, graduates celebrate commencement

More than 1,600 graduates joined the alumni network in May and June, as Embry-Riddle campuses across the country hosted commencement ceremonies.

In Daytona Beach, 740 students were conferred graduate status May 6 at the Ocean Center. Thomas J. Connolly, a retired chancellor of Embry-Riddle's Daytona Beach Campus and first-time recipient of the President's Endowed Chair in Aviation, was the commencement guest speaker. Later that day, the Daytona Beach Campus quadrangle was dedicated in Connolly's honor (See related article page 2).

At the Prescott Campus, 282 students walked the stage to receive their diplomas May 3, including 54 who completed their degrees through Embry-Riddle's Worldwide Campus. Robert Wilson, president of Business and General Aviation for Honeywell Aerospace, was the guest speaker for the ceremony, which for the first time in years was held off campus—at Tim's Toyota Center in Prescott Valley.

Gordon R. England, president of E6 Partners and former U.S. Deputy Secretary of Defense, was the guest speaker at the Worldwide Campus commencement held May 3 in the ICI Center at the Daytona Beach Campus. A total of 575 new graduates traveled to Daytona Beach to attend the event. Additional Worldwide Campus commencement ceremonies were held at campuses across the United States and in Europe throughout May, June and August. In all, the Worldwide Campus comprises more than 150 campus locations, including more than 90 on military bases.



① Sasha Wetmore ('14, DB) embraces her father, Shawn Wetmore, after being commissioned a second lieutenant in the U.S. Army. ② Jeanette Benjamin ('14, DB) carries a photo of her mother, Elizabeth Dover-Benjamin, during the procession. Her mother died in 2010. "She was a single parent who believed in an educated mind and worked tirelessly to ensure that her only child would have an opportunity to be educated," says Benjamin, who earned an M.S. in Software Engineering. ③ Kevin Moss ('14, PC) grins with pride upon completing a B.S. in Global Security and Intelligence. ④ Kristin Garcia ('14, PC) displays her personalized mortarboard. Garcia went on to participate in the 2014 Air Race Classic June 16-21; she and co-pilot Marlene Wessel ('13, PC) earned a 10th-place finish overall and were fourth place in the Collegiate Division. ⑤ Graduates of the Worldwide Campus at San Diego, Calif., enjoyed a June 15 commencement aboard the *USS Midway* aircraft carrier, now a naval aviation museum. ⑥ Jonathan Prydekker ('14, PC), left, and 2nd Lt. Anthony Munden ('14, PC).

FLORIDA HEATS UP WITH ALUMNI EVENTS APLENTY



Sun 'n Fun

More than 60 alumni and friends gathered April 2 at a restaurant in Lakeland, Fla., following a day at the Sun 'n Fun International Fly-In and Expo.



Women in Aviation celebration

On March 7, a standing-room only event was held in conjunction with the 25th Women in Aviation (WAI) Conference in Orlando, Fla. Embry-Riddle President and CEO John P. Johnson and his wife, Maurie, were honored guests, along with WAI founder Peggy Chabrian.



Public Safety Expo and Family Day

Alumni convened April 26 at Fort Lauderdale-Hollywood International Airport's Sheltair Hangar and ramp for lunch and demonstrations of the Broward County Sheriff's Office fire and rescue equipment. Frederick Reitz ('03, '11, VWW), Fort Lauderdale Alumni Network leader, organized the event.



From left, Frank Petrone Jr., Amanda Petrone and Frank Petrone III at the Daytona Beach Campus.



Three Generations of Eagles

For the Petrones, Embry-Riddle is a family affair

BY MELANIE STAWICKI AZAM

“He passed on to me this absolute love of aviation and I could never see myself doing anything else.”

— FRANK PETRONE III

When Frank Petrone Jr. was an 18-year-old soldier from Rhode Island headed to Florida for military flight training in 1942, he had heard the name “Embry-Riddle” but knew nothing about the institution.

But Embry-Riddle’s presence would run like a thread throughout his life and family.

It was an Embry-Riddle civilian instructor who introduced Frank Jr. to the thrill of flying at Carlstrom Field in Arcadia, Fla. He was among the thousands of wartime cadets trained by the then-named Riddle Aeronautical Institute, which was contracted by the U.S. government to provide flight training to the Army Air Forces during World War II.

“Training was at the beginning very new. We were flying in open-air biplanes,” says Frank Jr., who is now 90 years old. “It was scary and exciting.”

He flew Stearman PT-17 biplanes in Arcadia, but in the European Theater, Frank Jr. piloted a P-47 Thunderbolt fighter. After the war, he joined the Air National Guard in Rhode Island and pursued a career as a salesman.

He may have stopped flying, but his passion for flight never left him and he shared it with his son, Frank Petrone III.

“He passed on to me this absolute love of aviation and I could never see myself doing anything else,” says Frank III, an American Airlines pilot.

His father’s history with Embry-Riddle motivated Frank III to enroll at the Daytona Beach Campus, where he attended from 1980–83. He landed his first aviation job while attending Embry-Riddle.

“I started off towing banners up and down the beach,” Frank III recalls. The job helped pay the bills and led him to his future wife, Pam, whom he spotted from the air one day and determined to meet. “I’d see her car and I’d yell out the window,” he says. He and Pam, now a nurse and wellness coordinator at Embry-Riddle’s Daytona Beach Campus, have four daughters and live in Port Orange, Fla.

Frank III flew for a regional airline for 10 years, before getting hired at American Airlines, where he has worked for the past 16 years.

Now, another generation of Petrones is experiencing Embry-Riddle. Frank III’s oldest daughter, Amanda, recently completed her freshman year at the Daytona Beach Campus. Her first semester, she even lived in the same residence hall as her dad once did: Doolittle.

“I do think that is pretty cool,” Amanda says. A student in the human factors program, she doesn’t necessarily want to become a pilot, but she shares her father’s and her grandfather’s interest in aviation.

“She grew up like I grew up, looking at the sky,” says Frank III.

Who Says Turkeys Can't Fly?

A group of Embry-Riddle graduates formed lifelong bonds when they met as members of the Alpha Eta Rho fraternity at the Daytona Beach Campus in the 1960s and '70s. On April 4, 2014, nearly half of them returned to where their friendships started to reminisce and make new memories.

George Brewer ('75, DB), who helped coordinate the event, says the "Gathering of Turkeys," the reunion's unofficial name since 2010, was a great success. Explaining the somewhat unorthodox name, Brewer says, "We organized our first reunion to coincide with the 2010 Alumni Homecoming/Wings and Waves event, also billed as 'A Gathering of Eagles.' Somehow that just seemed a bit lofty for we of the graying feathers, and someone referred to our reunion as more of a 'Gathering of Turkeys,'" he says. The moniker stuck.

Far from field fowl, this group of alumni has enjoyed accomplished aviation careers. Among the dozen who hoped to attend in April there are eight military officers, six airline/corporate captains, two aircraft manufacturing executives, four A&P mechanics, three aeronautical engineers, two aviation business owners, two major defense and state department consultants, and one proud Embry-Riddle student parent.

In the end, only nine were able to make

the trip. Including Brewer, they were: 2012 Alumni Military Achievement Award winner and retired U.S. Marine Corps **Col. Gary Anderson** ('71, DB); **Bill Cherry** ('69, Non-degree), who flew in for the reunion in his North American T-28A; retired Air National Guard **Capt. Walter Donovan** ('70, DB); retired U.S. Air Force **Lt. Col. Shanon Dunlap** ('69, DB); retired U.S. Air Force **Lt. Col. Marc Nathanson** ('70, DB); **Bryan O'Reilly** ('69, DB; '75, WW); **Doug Smith** ('70, DB); and retired U.S. Navy **Lt. Bob Weiser** ('74, DB).

Among the reunion highlights, the group enjoyed a campus tour and a special lunch at the University Center Flight Deck. "We realized [Embry-Riddle] President Jack Hunt had a vision," said Nathanson, an FAA examiner, aerobatic pilot/instructor and retired FedEx pilot. "But I don't think we ever realized the school would become this big. The school and the fraternity have been important to my success. I'm very, very proud."

Smith added, "When we were here we studied in termite-infested Quonset huts, but it was the people that made the difference. The biggest single thing for me was these guys [Alpha Eta Rho brothers]."

The group plans to reconvene in Daytona Beach on Oct. 9–12 for Embry-Riddle's Wings & Waves Homecoming Weekend.

Alpha Eta Rho fraternity brothers from the 1960s and '70s reunited at the Daytona Beach Campus in April. The group enjoyed a campus tour, lunch and presentation by the Alumni Association.



Setting a Course for the Stars

A Japanese national achieves his goal of navigating spacecraft at JPL



BY ALAN MARCOS PINTO CESAR

More than 200 years have passed since Giuseppe Piazzi discovered Ceres, the dwarf planet in the asteroid belt between Mars and Jupiter. When the robotic spacecraft Dawn reaches Ceres in March 2015, Yu Takahashi ('07, PC) will be among the first people in the world to see the high-resolution images it collects.

Takahashi has this honor because he is a navigation engineer for Dawn at NASA's Jet Propulsion Laboratory (JPL). Working at JPL has been a dream since high school—one that became reality in December 2012.

Takahashi's interest in JPL began when he saw a video clip made for the Mars Exploration Rover (MER) launch in 2003. "Back then, I didn't understand why students needed to study math, chemistry, physics, and also all other disciplines that are not related to science or engineering. But it was clear that MER was all in one, both in grand scale and microscopic scale. It suddenly made sense why humans strived to advance their technology," Takahashi says.

He saw only about 20 seconds of the original clip on TV, but it marked his course for the next 10 years. His parents recognized he had a clear goal and encouraged him to follow it through, despite the expense. He left the cherry blossoms, temples and rivers of his home in rural Tokyo and moved to Prescott, Ariz., to attend Embry-Riddle on an F-1 student visa.

Rural Tokyo Is not Rural Wyoming

Takahashi's college roommate, Jeremy "Jaydee" Dyess ('08, PC), was from a different kind of rural. They leveraged each other's strengths: He helped Dyess with physics and math; Dyess taught him English, and invited him home to Wyoming for winter break. "We went shooting, hunting, shooting an arrow, four-wheeling and much more. It was unthinkable to me such a life existed in the U.S. I had the mind that things in the U.S. were Hollywood-like and New York City-like. The reality I saw there, including Prescott, was far from that," Takahashi says.

After graduating from Embry-Riddle, he earned a doctorate in aerospace engineering at University of Colorado Boulder, a necessity, he says, for any foreign national hoping to compete with American applicants. Former Embry-Riddle professor Karl Siebold's stories of tenacity and success pursuing jobs as a German immigrant encouraged him in his quest. "I immediately noticed that it is extremely hard to get a job as a foreign national in the aerospace industry. But I thought if he could do it, so could I," Takahashi says.

In 2004, Takahashi saw another clip from the MER mission on TV, showing the engineers at JPL in tears after a successful landing. It inspired him to see people working in an environment that they're so passionate about. Now, he's a part of that team.

Save the Date

Wings Out West Air Show and OctoberWest Homecoming Weekend

PRESCOTT, ARIZ.

THURSDAY, OCT. 2
Industry/Career Expo
eagleNIGHT and
Alumni Awards

FRIDAY, OCT. 3
25th Annual Alumni
Golf Tournament

SATURDAY, OCT. 4
Wings Out West Air Show
Fly-in, Static Display and
Pancake Breakfast
Fireworks



Wings & Waves Air Show and Alumni Homecoming Weekend

DAYTONA BEACH, FLA.

THURSDAY, OCT. 9
eagleNIGHT and Alumni Awards

FRIDAY, OCT. 10
Alumni Return to Classes
Campus Tours
Greek and College Reunions
Det. 157 Reunion,
Honoring 40 Years of ROTC

SATURDAY, OCT. 11
Wings & Waves
Air Show
Alumni Barbecue at the Bandshell

SUNDAY, OCT. 12
Wings & Waves
Air Show

Register today: alumni.erau.edu/homecoming2014

CAREER CORNER



LANCE ROTHWELL PHOTOGRAPHY

MARK YOUR CALENDAR for 2014 Industry and Career Expos:

THURSDAY, OCT. 2 • Prescott, Ariz.

WEDNESDAY, OCT. 8 • Daytona Beach, Fla.

For additional information and job resources:
www.careers.erau.edu

2013 Industry/Career Expos Recap

DAYTONA BEACH CAMPUS

Alumni
attended:

347

Students
attended:

1,909

Employers
represented:

287

PRESCOTT CAMPUS

Alumni
attended:

247

Students
attended:

682

Employers
represented:

49



EVENTS ON THE RADAR

For the most up-to-date list of
events, visit www.alumni.erau.edu/events.

SEPT. 13

Worldwide Campus
Metro-Hub Commencement,
Seattle, Wash.

SEPT. 14

Seattle Alumni Network Cruise,
Seattle, Wash.

OCT. 2

Industry/Career Expo,
Prescott, Ariz.

OCT. 2-4

Wings Out West Air Show and
OctoberWest Alumni Homecoming,
Prescott, Ariz.

OCT. 4

Worldwide Campus
Metro-Hub Commencement,
Dallas, Texas

OCT. 8

Industry/Career Expo,
Daytona Beach, Fla.

OCT. 8-12

Wings & Waves Air Show and
Alumni Homecoming,
Daytona Beach, Fla.

OCT. 21-23

National Business Aviation
Association's 67th Annual Meeting
& Convention, Orlando, Fla.

DEC. 13

Prescott Campus Commencement,
Prescott, Ariz.

DEC. 15

Daytona Beach
Campus Commencement,
Daytona Beach, Fla.

JAN. 5-9

American Institute of Aeronautics
and Astronautics SciTech Forum,
Kissimmee, Fla.

JAN. 16-17

Embry-Riddle's Aviation,
Aeronautics and Aerospace
International Research Conference,
Phoenix, Ariz.

MARCH 2-5

Heli-Expo 2015,
Orlando, Fla.

MARCH 5-7

Women in Aviation
International's 26th
Annual Conference,
Dallas, Texas

CLASS NOTES

To share your Class Notes with *Lift* and your fellow alumni, join Embry-Riddle's online community at www.alumni.erau.edu/join today; or submit your announcements through email to eralumni@erau.edu. For guidelines, visit www.alumni.erau.edu/notes_guidelines.

Career News

1960s

Albert A. Johnson Jr. ('63, MC) was honored in 2013 with the Department of Transportation Federal Aviation Administration's Charles Taylor Master Mechanic Award for providing more than 50 years of dedicated service in aviation safety. Also in 2013, Johnson retired as director of maintenance for Robinson Aviation and piloted for the first time the MA-5 Marquart Charger aircraft that he built over the past 40 years. He credits Embry-Riddle for giving him the basics to be a good aircraft mechanic.

1970s

Rick Brown ('72, DB) regularly travels to Korea for his work with The Boeing Company and often meets fellow Embry-Riddle alumni, including **D.H. Kim ('10, DB)**, a first officer with Korean Air, whom he met recently.

Captain Doug Goldman ('78, DB) retired from Airborne Express/ABX Air on Nov. 1, 2012, after 33 years of service as a 767 captain.

1980s

Juan Vaquerizo ('85, DB) was recognized as one of the 2014 Florida High

Tech Corridor *Faces of Technology* for advancing and revolutionizing technologies in the modeling, simulation and training industry. Vaquerizo is president of Orlando-based Advanced Simulation Research.

Frank Ayers ('87, WW), chancellor of Embry-Riddle's Prescott Campus, was inducted in September 2013 into the Virginia Tech Aviation Hall of Fame. The annual award from Air Force ROTC Detachment 875 at Virginia Tech

honors one of the school's alumni for notable achievements in aviation and aerospace. During his years at Virginia Tech, Ayers was a member of Air Force ROTC and the Virginia Tech Corps of Cadets.

Capt. Larry Bollrud ('88, WW) retired from FedEx Corporation after 35 years of combined service to the Flying Tigers and FedEx. He served as a line check airman on both the B-727 and Airbus 300/310 series aircraft for 15 years, and for six years in the U.S. Air Force.

Peter Trimarche ('88, DB) is a B-767/757 instructor and check airman at FedEx, based in Memphis, Tenn.

Riaz Zaidi ('88, '90, '94, DB) was honored for 20 years of service to the Industry Advisory Board (IAB) for Embry-Riddle's College of Mechanical Engineering at the Daytona Beach Campus. Zaidi is the longest-serving member of the IAB, having joined in 1994. In addition to his Embry-Riddle degrees, Zaidi holds three master's degrees from Washington University in St. Louis, Mo., and is pursuing a fourth: an M.S. in Systems Engineering. He is a systems engineer at The Boeing Company in St. Louis (formerly McDonnell Douglas) and works on environmental control systems for

the F-15 aircraft. He is also a former volunteer for the Embry-Riddle Alumni Council for Enrollment Support (1992–99), which provided alumni spokespersons for high school college fairs. Zaidi has received numerous awards and recognitions including Who's Who in Science and Engineering, Who's Who in America, and Who's Who in the World.

Jeffrey Osterlund ('89, DB) is the Houston functional and engineering operations manager for Boeing Space Exploration. Previously, he was the exploration chief engineer for United Space Alliance in Houston, Texas, for 13 years; and prior to that, he was a project engineering manager at Lockheed Martin Aeronautics in Marietta, Ga.

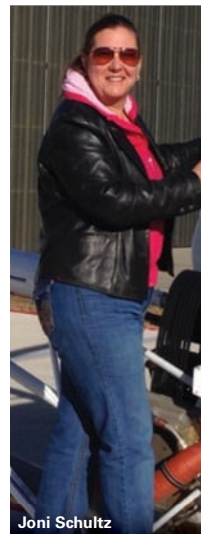
1990s

Jerry MacDonald ('91, DB) joined Spirit Aeronautics, a trade name for Spirit Avionics Ltd., based in Columbus, Ohio, as an aircraft production supervisor.

Caroline M. Vandedrinck ('91, DB) is vice president of Europe and Central Asia for Sikorsky Aircraft Corporation. She is responsible for the business development of the helicopter and the aftermarket services for the military and civil applications, as well as program management.

Joni Schultz ('93, DB) was awarded the Bell 206 Factory Flight Training Scholarship at the Whirly-Girls Banquet at the 2014 HELI-EXPO, which was held in Anaheim, Calif.

Terry Mularkey ('94, WW) is executive director of development for Nova Southeastern University in Fort Lauderdale, Fla. A member of Embry-Riddle's Alumni Advisory Council and retired lieutenant colonel for the U.S. Army, he served as executive director of Embry-Riddle's Alumni Association from



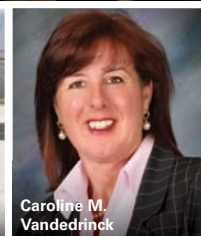
Joni Schultz



Albert A. Johnson Jr., left



Luis Alberto Lopez



Caroline M. Vandedrinck



Frank Ayers



D.H. Kim, left, and Rick Brown



Jerry MacDonald

CAMPUS LEGEND

MC	Miami Campus
DB	Daytona Beach, Fla.
PC	Prescott, Ariz.
WW	Worldwide Campus

2003–2005 and earlier as a director of development for Embry-Riddle Athletics. More recently, Mularkey was senior director of development for Sodexo Campus Services for the Southeast.

Chris Deck ('94, DB, Non-degree)

is managing director for the Univers Workplace Solutions' Central Region. Univers is a benefit communications and enrollment solutions provider. Deck is a veteran of the U.S. Navy, serving in naval aviation during the Gulf War; he resides in Frisco, Texas.

John Benoit ('95, WW) is responsible for new business development at Performance Software. Benoit is also a licensed commercial pilot and flight instructor, and spent several years as an airshow stunt pilot.

Michael Durant ('95, '97, WW) shared his story of survival and captivity on Feb. 13, 2014, with ROTC cadets at Embry-Riddle's Daytona Beach Campus. A pilot and an author, Durant was held prisoner for 11 days in 1993, after a raid in Mogadishu, Somalia. He was a member of the 160th Special Operations Aviation Regiment (Night Stalkers) and retired from the Army as a chief warrant officer 4 Blackhawk helicopter master aviator.

Luis Alberto Lopez ('96, '99, DB) is a lead mass properties engineer at Bombardier Aerospace in Montreal, Canada. In September 2013, Lopez personally participated in the first maiden flight of Bombardier's C Series aircraft.

2000s

Matthew A. Silverman ('02, '09, WW) was named director of aviation for DynCorp International on the LOGCAP IV Contract in Kandahar, Afghanistan, in January 2014. He directs the operations of an internationally diverse workforce of more than 180 employees and 100 subcontract personnel, who provide support to U.S. and NATO forces across southern and western Afghanistan.

Prakash Subramanian ('02, DB) and **Malcolm Kirwan** ('94, DB), who are both current employees of the MITRE Corporation, received the company's Modern-Day Technology Leader awards during the 2014 Black Engineer of the Year Awards conference.

Maj. Ryan Graf ('03, PC; '11, WW) piloted one of the two F-22 Raptors that flew on Jan. 21, 2014, marking the 95th Fighter Squadron's first F-22 sortie since the squadron's reactivation in October 2013. Graf is the 95th Fighter Squadron's assistant director of operations at Tyndall Air Force Base in Florida.

Col. Jennifer L. Uptmor ('03, WW) is the commander of the 22nd Operations Group, McConnell Air Force Base, Kan. She is responsible for the employment of 48 KC-135 Stratotanker aircraft through five local squadrons and one Total Force Integrated geographically separated squadron at Pease Air National Guard Base in New Hampshire.

Stan Kuliavas ('04, DB) was promoted to vice president of sales and business development at Pilatus Centre Canada. Kuliavas is also the Embry-Riddle Alumni Network leader for the Toronto area.

Allison Odyssey ('04, DB) is vice president of NewSpace Market Development at Space Florida.

Darin Underwood ('05, WW) has been named Rockwell Collins' Engineer of the Year. Underwood is chief systems engineer for the Bombardier C Series program and oversaw the implementation of Pro Line Fusion integrated avionics on its first air transport jet.

Capt. Ian R. Osterreicher ('07, DB) was presented with the Distinguished Flying Cross, one of the Air Force's highest honors, on Feb. 28, 2014, by Secretary of the Air Force Deborah Lee James at Moody Air Force Base in Valdosta, Ga. A member of Embry-Riddle's Air Force ROTC Detachment 157 Alumni and Cadet Association, Osterreicher and another pilot are credited with saving the lives of 60 soldiers during a July 23, 2013, operation in Afghanistan.

Enrique Perrella ('10, DB) is the publisher and editor-in-chief of *Airways* magazine.

Kristine Parrish ('10, '12 PC) was hired as a first officer at SkyWest Airlines in February 2014, and has earned her ATP certificate.



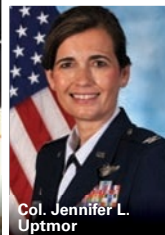
Chris Chung, right, with Caesar Yuen



Prakash Subramanian



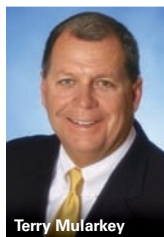
Malcolm Kirwan



Col. Jennifer L. Uptmor



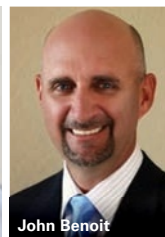
Darin Underwood



Terry Mularkey



Chris Deck



John Benoit



Michael Durant



Syed Hammad Mumtaz and Bobby Malesra



Secretary of the Air Force Deborah Lee James pins the Distinguished Flying Cross on Capt. Ian R. Osterreicher, A-10C Thunderbolt II pilot with the 74th Fighter Squadron.

Chris Chung ('11, PC) with **Caesar Yuen** ('12, DB) are both cadet pilots with Cathay Pacific Airways. The two posed for a photo at Chung's cadet pilot program graduation ceremony in Adelaide, Australia. Chung will soon start flying as a second officer on the Boeing 777-300ER.

Frank Conenna Jr. ('12, DB) successfully graduated from Officer Candidate School and is now a commissioned officer in the U.S. Navy.

Syed Hammad Mumtaz ('12, DB) and **Bobby Malesra** ('10, DB) reunited at the 2013 Dubai Airshow. Malesra, who is in the U.S. Air Force, was Mumtaz's orientation team leader when he first came to Embry-Riddle. "I honestly couldn't believe it! We both recognized each other instantly," says Mumtaz. "This just shows how ERAU Eagles are everywhere!"

William Hecksteden ('13, DB) and Rob Wilkes, co-owners of Pilot Mission, debuted their latest product, PlaneLogix, an aircraft maintenance logbook digitization and transcription service, at the 2014 Sun 'n Fun International Fly-In & Expo in Lakeland, Fla. Childhood friends, Hecksteden and Wilkes launched Pilot Mission, which is headquartered in Carrboro, N.C., in 2010.

Stephen Rayleigh ('13, PC), **Matthew Lyon** ('13, PC) and **Michael du Breuil** ('15, PC) created Swift Radioplanes LLC in 2013. The three met and developed their business plan through their participation in the Unmanned Aircraft Systems Club

at Embry-Riddle's Prescott Campus. Swift Radioplanes recently landed its first government contract to provide detailed aerial mapping of China Lake in California.

Family News

2000s

Amanda O'Brien-Brown ('02, '05, DB) and her husband, Dan, welcomed their second child, Zachary Daniel, on Jan. 16, 2014. Zachary was born at Mount Sinai Hospital in New York City at 8:37 a.m., weighing 8 pounds,

12 ounces, and measuring 22 inches long. Amanda, Dan and big sister Amelia are all happy and healthy. Amanda is a member of the Embry-Riddle Alumni Advisory Council.

James Bicking ('06, DB) and **Megan (Szymanski) Bicking** ('06, '09, DB) gave birth to a son, Zachary James Bicking, on May 19, 2013. James is a civilian Air Force engineer at Wright-Patterson Air Force Base, and Megan is a flight dispatcher for PSA Airlines in Vandalia, Ohio. The family resides in Beavercreek, Ohio.

Jared ('10, WW) and **Valerie Kisseloff** ('10, WW) welcomed their first child, Samuel James Kisseloff,

on Aug. 27, 2013. Jared is the director of front-end operations at Palm Coast Data, and Valerie is the director of admissions at Embry-Riddle's Worldwide Campus.

Marriages/Engagements

2000s

Danielle Howard ('12, DB), a U.S. Navy lieutenant junior grade flying the Romeo helicopter, and John Fritts, also a U.S. Navy lieutenant junior grade flying the Romeo helicopter, are engaged to be married. Their wedding is set for Oct. 11, 2014, in Jacksonville, Fla.

Other

Retired U.S. Air Force Col. Chuck Graf ('75, DB) and **Capt. Ian "Screech" Osterreicher** ('07, DB) attended the April 12, 2014, Air Force ROTC Detachment 157 Dining Out event in Daytona Beach, Fla. Graf is president of the Air Force ROTC Det. 157 Alumni and Cadet Association, and Osterreicher is a member of the association.

First Officer/International Relief Officer Joe Lamanna ('90, DB), **First Officer/International Relief Officer Art Thature** ('89, DB) and **Captain Dave Doncaster** ('91, DB) met during a flight to Afghanistan. All three alumni work for Air Transport International, a military cargo/passenger carrier, and attended Embry-Riddle at about the same time—but they never met on campus. "It took us 14 years and thousands of miles later to meet. Once we realized we all graduated from Riddle, we started talking about all the instructors we shared, like Wiggins, Stackpool and Van Bibber," Lamanna says. "It just goes to show you that Riddle people are everywhere," Thature adds.

Ken Chatham II ('06, DB) and his dad, Ken Chatham Sr., are profiled in the February/March 2014 issue of *The House & Home* magazine for their



Stephen Rayleigh, Matthew Lyon and Michael du Breuil



Amanda O'Brien-Brown and family



William Hecksteden



Frank Conenna Jr.



Zachary James Bicking



Samuel James Kisseloff



Danielle Howard and John Fritts

EAGLE AUTHORS

TECHNO THRILLER EXPLORES SINISTER PLOT IN IOWA TOWN



Michael O'Neal ('06, DB) first penned his novel, *The Eighth Day*, in his sophomore year of high school. It won the Fountainhead Productions National Writing Contest in 2000, but the company folded before the book could be published. Since then he has graduated from the professional pilot program at Embry-Riddle and served a tour of duty in the National

Oceanic and Atmospheric Administration Corps.

O'Neal's book was published in August 2010 by BluewaterPress, a publishing company owned by Joe Clark, assistant professor at Embry-Riddle's Daytona Beach Campus. O'Neal signed copies of the book at the Daytona Beach Campus bookstore during the Wings & Waves/Alumni Homecoming Weekend that year. A new release of the book debuted in 2014 and an audiobook became available this summer.

"*The Eighth Day* is a young-adult techno-thriller with a dash of science fiction about five friends who band together after one of them stands falsely accused," O'Neal says. In their hunt for facts, the teenagers discover shadowy international organizations and deep secrets beneath the calm surface of their small Iowa town. "Professor Clark likens it to a '24 for teens,'" he adds.

When he's not writing, O'Neal teaches nautical science and flies with the U.S. Coast Guard Auxiliary.



T. Yomi Obidi ('76, DB), *Theory and Applications of Aerodynamics for Ground Vehicles*, published in February 2014 by SAE International, guides the reader through various aspects of aerodynamics for passenger cars, trucks, trains, motorcycles and race cars. It is a fundamental look at the topic, including review questions and projects to help the reader apply the concepts introduced in each chapter.

George Sarris ('85, WW), *Cowardice in Leadership; A Lesson in Harassment, Intimidation and Reprisals*, a memoir published in April 2014, describes Sarris' exploits following his discovery of maintenance issues with the RC-135 aircraft while he was working as a civilian mechanic for the Air Force. He says the book is an effort to restore his reputation, which was tarnished after he blew the whistle on the 55th Wing for allegedly utilizing aircraft that were not airworthy.

Retired Marine Corps Capt. Mark Hewitt ('94, WW), *Special Access*, an espionage novel published by Black Rose Writing in September 2013, portrays a contract CIA pilot of a silent aircraft executing airborne counterterrorism missions in the wake of the killing of Osama bin Laden. The main character, who is also an adjunct professor at Embry-Riddle, eventually must choose whether toppling a high-level conspiracy is worth losing his career and betraying a friend. The book was approved by the CIA Publication Review Board.

Jonathan Rupprecht ('09, WW), *Drones: Their Many Civilian Uses and the U.S. Laws Surrounding Them*, published in 2014, is a useful resource for hobbyists, lawyers, businesspeople or anyone else interested in the legal ramifications of integration of unmanned aircraft systems into the national airspace. Rupprecht is a member of the Florida Bar and a commercial pilot with single-engine, multi-engine and instrument ratings.

EDITOR'S NOTE:

Eagle Authors features traditionally and self-published books authored by Embry-Riddle alumni and faculty. To have your book considered, email the editor at liftmag@erau.edu.



From left, 2nd Lt. Joe Augello, 1st Lt. Jeffrey Leversedge and 2nd Lt. Angelo Gnodle



Capt. Ian 'Screech' Osterreicher and U.S. Air Force Col. (ret.) Chuck Graf



From left, Art Thature, Dave Doncaster and Joe Lamanna



U.S. Navy Lt. Albert D. Snipes

volunteer work with Angel Flights, a nonprofit organization that flies needy people with medical problems to and from hospitals throughout the Southeast. Volunteers use their own aircraft to transport the patients. When they're not volunteering, the Chatham's operate The Driver Education School of Virginia, with locations in Montross and Tappahannock.

U.S. Navy Lt. Albert D. Snipes ('08, WW) is pictured showing off his new ride, an MH-60S Seahawk, sporting his name and call sign, Albert "Podunc" Snipes.

Three Embry-Riddle Prescott Campus graduates, **2nd Lt. Joe Augello** ('13, PC), **1st Lt. Jeffrey Leversedge** ('11, PC), and **2nd Lt. Angelo Gnodle** ('13, PC) posed for a photo together while proudly serving their country in Afghanistan.

In Memoriam

1950s

David L. Anderson ('58, MC)

March 23, 2013

1960s

Charles L. Hatle ('60, MC)

Jan. 2, 2014

Carl W. DeHaven Jr. ('69, WW)

April 10, 2014

1970s

Ralph J. Dietz ('72, '81, DB)

Oct. 5, 2013

1980s

Jerry P. Smith ('81, DB)

May 22, 2013

1990s

Nelson O. Simpson Sr. ('90, WW)

Oct. 27, 2013

Joel K. Benson ('91, DB)

Dec. 12, 2013

Maria M. Murphy-Andary ('92, WW)

Jan. 9, 2014

Christopher J. Estrada ('96, PC)

Jan. 13, 2014

Albert R. Medford III ('98, WW)

June 18, 2013

2000s

Retired U.S. Army 1st Sgt. Michael

P. O'Connor ('02, WW)

Nov. 12, 2012

Kristopher L. Noble ('05, DB)

Jan. 10, 2014

Bruce W. Smith III ('11, DB)

May 6, 2014



Alfred W. Skeaney

T. HIGBEE EMBRY
SOCIETY DONOR

DEC. 30, 2013

Alfred "Al" Skeaney, a former state trooper in New York's motorcycle unit, retired from the force in the early 1980s and relocated to Daytona Beach to be near his beloved racetrack. He picked up work as a security guard at Embry-Riddle. His long-time friend and lawyer, Phil Elliott (HonDoc, '04), Embry-Riddle Trustee Emeritus, describes him as "a little, short guy, and to some extent he had the short guy attitude. He was feisty as hell and quite independent."

He had also worked part time for a struggling cable company in New York, receiving company stock as payment, Elliott says. In 1982, Elliott represented Skeaney when Newhouse Cable negotiated to buy the company. Skeaney's stock was essential to the deal, and was worth a substantial sum. After the sale closed, Skeaney quietly donated \$116,000 in a series of gifts to Embry-Riddle. Skeaney kept these gifts secret even from Elliott, an enthusiastic supporter of the university.

The former trooper was still a millionaire when he passed away at age 87 in December 2013, but he was never flamboyant about his wealth—a vestige of his spare upbringing in Brooklyn, Elliott says.

Skeaney had no immediate family. "He married once. He said he tried it, but he didn't like it," says his cousin, Miriam Berger. His legacy is in his contributions to organizations like Embry-Riddle.

Robert "Bob" B. Whitney ('42, MC)

MARCH 15, 2014

Robert "Bob" B. Whitney loved aviation since reading Charles Lindbergh's book *We*. "The kid next door to me, his folks got him the book and used to read him a chapter a night before he went to bed. I'd go over and listen to it because I didn't have the book," Whitney said in a 2003 interview with Embry-Riddle's Heritage Project.

When the United States joined the Allied forces in World War II, Whitney was eager to be a pilot. He went to Embry-Riddle's training facility at Carlstrom Field in Arcadia, Fla., and learned to fly a PT-17 Stearman there. "The instrument panel on that PT-17, almost half of the gauges were blacked out so you couldn't read them. You had to go by your own senses," he said in 2003.

His second wife, Mary Whitney, says he made a mistake during flight training and was eliminated from the piloting program. Instead of flying, Whitney served in the Air Force as an aircraft armorer and with a B-29 mobile training unit during the war.



Whitney retired as a chief master sergeant after 31 years of service in the Air Force and held fast to his love of aviation and Embry-Riddle. At 98 years old at his passing, Bob is believed to have been Embry-Riddle's oldest living alumnus. He returned to campus for homecoming as often as possible, reconnecting with friends like Harold Kosola ('63, MC), a longtime supporter of Embry-Riddle and pioneer of the Alumni Association. "We saw Harold at the reunions, and he would sometimes visit us at home. He was not an

airman, but he was an engineer. He was a good friend of ours and a good alumnus, too," Mrs. Whitney says.

The couple still enjoyed aviation even when their health prevented traveling to Embry-Riddle

reunions. From their home in Indian Harbour Beach, Fla., they would listen for incoming Boeing 747 Shuttle Carrier jets. "When the [Shuttles] would come over piggyback from Arizona, we could see them going back to Cape Canaveral. They would go by over the ocean right near us," Mrs. Whitney recalls.

Frank Wencil

PROFESSOR EMERITUS
JULY 27, 2011

Embry-Riddle didn't always offer a B.S. in Applied Meteorology. There used to be just one course, with a small lab in what is now the Information Technology building at the Daytona Beach Campus. The efforts of Professor Emeritus Frank Wencil changed that in the mid-1980s. His work and his demeanor helped usher in a new atmosphere at Embry-Riddle.

"It was people like Frank who recognized that they needed to transition from an old military-style school to something that would attract students," says Eric Schoeler ('90, DB), Wencil's former student and longtime friend.

Wencil made sure meteorology equipment became a priority. "When I first got there, we didn't have anything in the way of a weather center. There was a weather facsimile recorder that printed out facsimile charts," says Victor Morris, who was a meteorology professor at Embry-Riddle from 1981-94. "Frank and I both—but mostly Frank—researched getting a weather lab and a computer in there. You would laugh at the computer's capacity now, but for the first time we were able to do a live weather briefing with the students."



Though he was a Vietnam veteran, Morris says Wencil was different from many of his colleagues; he didn't treat students as though they were in a military academy.

Wencil's kindness and empathy touched many students. "He was known throughout the years for opening his home to students and assistants alike, including for Thanksgiving dinner. That was the kind of guy he was," Schoeler says. "He became like a father to me and many others."

Thanks to Wencil's work, Embry-Riddle's Applied Meteorology program has enjoyed a steady stream of students over the years. Currently, the program has 60 students enrolled; and it celebrated 23 new graduates in May 2014. After he passed away, his wife, Nancy, established the Frank E. Wencil Memorial Scholarship Fund for meteorology majors.

Tej Ram Gupta

PROFESSOR OF AEROSPACE
ENGINEERING

MAY 7, 2014

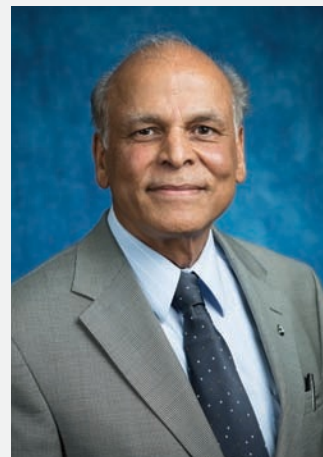
The Daytona Beach Campus community has lost one of its colleagues, Professor Tej Gupta. Gupta joined Embry-Riddle's Daytona Beach faculty in 1979. He taught students how to improve aircraft designs by using computational methods and boundary layer theory. "During his long tenure, Tej touched the lives of thousands

of students and brought prestige and recognition to the university through his service to the aerospace professional community at the local and national levels," says Maj Mirmirani, the dean of the College of Engineering at Embry-Riddle's Daytona Beach Campus.

Throughout his career, Gupta received numerous awards and recognition, including the Overall Professor of the Year Award in 2011 from Embry-Riddle's Alpha Mu chapter of the Pi Kappa Alpha fraternity;

the Outstanding Teacher of the Year Award in 2004; and the American Institute of Aeronautics and Astronautics (AIAA) Faculty Advisor Award Region II Southeastern United States in 1995-96. He was also an associate fellow of AIAA.

"Tej was an iconic figure in the Aerospace Engineering department, a gentle soul, a kind and generous man, a teacher, and a mentor," Mirmirani says. "In his 35 years of dedicated service to the university, he left an indelible mark on our institution."



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difference.*

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