

AEROCOM

JOHN D. ODEGARD SCHOOL OF AEROSPACE SCIENCES

WINTER 2023



TABLE OF CONTENTS

AEROCOM | WINTER 2023

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05 Congratulations Retirees!

06 Captains Courageous

07 FAA Program to help Veterans Dreaming of Flight Takes off

08 Having The Hard Conversations

10 Faces of the Industry

12 Students Inspire Next Generation of Aviators

14 Space Studies

16 Aerospace Connections

18 Leaders in Aerospace

20 Athletes in Flight

22 Who loves snow more than Aaron Kennedy?

24 Thread, an Automated Inspection Technology Startup, Deeply Rooted in UND

26 UND Aerospace: Getting the Lead Out

28 Competition Teams





Dear UND Aerospace Alumni, Family, and Friends,

Happy New Year! It's already been two years since I arrived at UND and we've been able to accomplish quite a bit in that time. In this issue, you'll read more about just a few of the great things that have occurred since last summer.

The University of North Dakota unveiled our new Strategic Plan, called UND LEADS, and many of our faculty, staff, and students took part in the planning, discussions, and reviews to help guide us all in the coming years. We'll soon be taking a look at our School and Departments to align our goals and objectives to continue to lead in all of our programs.

We're excited about our planned Flight Operations Center and are actively fundraising so we can break ground as soon as possible. Thanks to Si Robin for pledging a \$5M match to get things started. We have a number of briefing rooms and offices that are available for sponsorship. We're starting one portion early—affectionately called the “Crockston Wing” of offices between our current flight ops area and maintenance. Renovations on this portion will start later this spring and be done by the end of the summer. We're ready to start the bigger demolition and construction for the new Flight Operations Center as soon as we have the funds available.

Space Studies continues to lead the way in space suit development and Lunar/Mars Habitat research. We are working across campus to expand our Space and National Security programs and will soon open our own Space Operations Center (SpOC) classroom while working to install communication and tracking antennae to train the next generation workforce for the space industry.

Our Atmospheric Sciences program is going strong. We are expanding our research projects and providing experiential learning opportunities for both undergraduate and graduate students. Additionally, at the national level, we're seeing more overlap with programs in Earth Systems Science and Policy. We are also seeing more interest in sustainability across the entire aerospace industry and looking for areas where we can make an impact.

Our flying programs were cruising along until winter decided to show up at the end of last semester. Overall, we're ahead of our scheduled pace thanks to the great conditions we had up until then and will catch up as soon as we can get everyone back in the air. The Aviation Safety and Operations major is exceeding expectations in growth and is training our students how to use the same software that the airlines use to solve real-world problems for our own fleet as well as in the airline industry.

We look forward to catching up with you at some of our big events starting with our SAMA Career Fair and awards banquets, April 20-22. We're also celebrating our program's 55th anniversary and will hold our Alumni and Friends event on Wednesday, July 26th at the EAA Airventure Airshow in Oshkosh, Wisconsin. Next fall, UND Homecoming will be the week of October 2nd-7th with our Aerospace Hall of Fame luncheon on October 6th. We hope to see you at these or one of the other alumni and friends events we have across the nation. And let us know if you are coming to Grand Forks and we'll be happy to show you what's new!

ROBERT KRAUS | DEAN, JOHN D. ODEGARD SCHOOL OF AEROSPACE SCIENCES

CONGRATULATIONS RETIREES!

Thank you for your dedication to UND Aerospace



LEGACY OF AN ACADEMIC AND AVIATION LEADER

Paul Lindseth, professor of aviation and former dean, retires after 37 years at the Odegard School

A letter written by Bruce Smith, dean emeritus of the John. D. Odegard School of Aerospace Sciences, on the occasion of Paul Lindseth's retirement party captured Lindseth's enduring influence as a longtime UND Aerospace leader.

"The status of the Odegard School as the preeminent aerospace college in the world is directly attributable to your efforts as the associate dean and dean," Smith wrote. "I have often said that your position as associate dean was equivalent to all the other academic colleges' deans at UND."

"You led the entire academic side of the Odegard School, including research, federal and state-funded programs, direction of department chairs and the addition of a fifth

department, Earth System Science & Policy," Smith's letter continued. "You transformed the school into a truly academic college with master's degrees and doctoral programs in every discipline of the Odegard School."

He finished his note by saying the late John Odegard, founder and first dean of UND Aerospace, would be proud of everything Lindseth accomplished in his nearly four decades at UND.

"Thank you for all you have done for me, the Odegard School, the aerospace industry and the state of North Dakota," Smith said. "It was a remarkable run."

Lindseth, who served under Smith's deanship as assistant and associate dean for academics from 1999 until 2016, then succeeded Smith as dean through 2020, and retired at the end of 2022.



[Read the full UND Today story online!](https://und.edu/blogs)
und.edu/blogs



MEET 3545 GAFFEY'S NAMESAKE

Having an asteroid named for him is just one of Chester Fritz Distinguished Professor of Space Studies Emeritus Mike Gaffey's honors

Mike Gaffey, professor of Space Studies and a Chester Fritz Distinguished Professor, recently was awarded the title of Chester Fritz Distinguished Professor of Space Studies Emeritus. As Gaffey takes this new status into his retirement, he will continue to advise the University and stay involved in research projects.

Pablo de León, professor and chair of the Department of Space Studies at UND, said that throughout Gaffey's career, Gaffey was "a natural advisor to the students and faculty," and that with this Emeritus status, "we are lucky to still have access to his expertise."

Gaffey earned his Bachelor of Arts in Geology and Astronomy from the University of Iowa in 1968 and then his Master of Science in Geology in 1970. He then went on to get his Doctor of Philosophy in Earth and Planetary Science from the Massachusetts Institute of Technology in 1974.

Gaffey has worked at UND since 2001. During his time here, he taught a variety of Space Studies courses ranging from "Introduction to Space Studies" to "The Planet Mars." Gaffey was known for "always answering the call when he was needed," said Dr. de León.



[Read the full UND Today story online!](https://und.edu/blogs)
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2022 RETIREMENTS

Alan Borho, Research Associate in Atmospheric Science & Instructor in Atmospheric Science | 33 years

Henry Borysewicz, Director of ASN/SCC | 27 years

Christopher Brown, Crew Supervisor of Line Operations | 17 years

Michael Gaffey, Professor of Space Studies | 21 years

Paul Lindseth, Dean & Professor of Aviation | 34 years

Benjamin Trapnell, Assistant Professor of Aviation | 33 years



CAPTAINS COURAGEOUS

Eric Poole and Lyle Parker, exceptional alums, aviators and airline professionals, inducted into UND Aerospace Hall of Fame

Lyle Parker '70

After earning his bachelor's degree in public administration, and upon his commissioning through the U.S. Air Force ROTC program, Lyle Parker served as a U.S. Air Force officer and aviator from 1970 to 1993.

Parker retired from military service as Headquarters Director of Operations for the Montana Air National Guard. He'd previously served as an F-106 pilot and weapons systems officer in the F-4 fighter jet.

During his military service, Parker set a world record for flying supersonic and launching an unguided Genie AIR-2 that denotated just seven feet from its target at a closure rate of 4,070 miles per hour.

After working as a flight officer for United Airlines from 1977 to 1981, Parker took on a career as a captain, first officer and flight engineer for Alaska Airlines from 1981 to 2010.

With 30,000 hours of flight time across multiple aircraft, Parker played a critical role in launching the MD-80 airliner at Alaska Airlines, serving as an instructor pilot, FAA examiner and training developer.

At UND Aerospace, Parker has been a mentor to hundreds of professional pilots from UND's aviation program.

Eric Poole '90

A 1990 graduate in aeronautical studies, with a minor in space studies, Eric Poole also had an athletic career at UND as a three-year letterwinner for the football team.

For the next three years, Poole worked at UND as a flight instructor and advisor to the University's Black Student Union.

Poole went on to serve in the U.S. Navy as an operations and test control officer from 1994 to 2000. He also served as a physics and football coach at the Naval Academy Prep School during that time.

Following his military service, Poole worked as a captain and first officer for Midwest Express Connect from 2000 to 2005. He is now a captain and serves as Newark Base Chief Pilot for JetBlue Airways, having joined the airline in 2005.

At JetBlue, Poole has been instrumental in founding the JetBlue Foundation Aviation Career Exploration Academy Initiative, as well as growing the JetBlue University Gateway Program to include six schools and seven campuses.

In 2020, Poole helped UND students establish their own chapter for the Organization of Black Aerospace Professionals.



Watch the Hall of Fame Induction on YouTube!

Visit the @UNDaerospace channel



Nominate an alum for 2023 Hall of Fame!

aero.und.edu/events/hall-of-fame.html



FAA PROGRAM TO HELP VETERANS DREAMING OF FLIGHT TAKES OFF

\$2.5 million program will help veterans pay for flight lessons

UND has been awarded \$2.5 million in a cooperative agreement from the Federal Aviation Administration to assist U.S. military veterans with paying for flight training and providing extra support to ensure a successful transition to the airline workforce.

The Vets 2 Wings program (V2W) was announced to UND aviation students on Oct. 4, in a visit by FAA administrators. Through V2W, veteran students who have already obtained a private pilot's license can apply for funding assistance to cover the cost of advanced flight training. There are about 100 veteran aviation students at UND, and efforts are underway to recruit 40 current students into the program, as well as 15 new students.

U.S. Senator John Hoeven, R-N.D., was instrumental in securing the V2W funding. On Thursday, Oct. 6, Hoeven visited the John D. Odegard School of Aerospace Sciences to commemorate the veteran flight training program.

"Our nation is facing a severe pilot shortage, and we need a new generation of qualified pilots to help ensure continued access to safe and reliable air service, which is vital to our economy and quality of life," said Hoeven. "It only makes sense to leverage our world-class flight school at UND and offer this opportunity to veterans. Through the funding we secured, we are establishing a pipeline from UND to commercial airlines to help meet the demand for new pilots, while better supporting veterans who want to pursue this career."

UND President Andrew Armacost offered praise for V2W, saying it helps open the doors to a needed career for the nation's veterans.

"We are pleased and proud to participate with the Federal Aviation Administration on this cooperative agreement for veteran students," Armacost said. "Our veterans have truly earned these educational resources through their honorable service to our nation, and these funds will assist our dedicated students in realizing their dreams of becoming commercial pilots."

Robert Kraus, dean of UND Aerospace, said he appreciates the opportunity the funding gives to support veteran students.

"This program provides a second wind to help our veteran students get across the finish line and into their second career of service — as professional aviators," Kraus said.

Elizabeth Bjerke, associate dean of UND Aerospace and principal investigator of the V2W program said she is deeply grateful to Sen. Hoeven for working with the FAA to secure funding.

Bjerke said she is proud of the administrative team she assembled to help her oversee the V2W program. She said she wanted to involve UND administrators who have served in the U.S. military, so veterans could participate in implementing a program specifically for veterans. Of the six-member team, four people are veterans.



Read the full **UND Today** story online!
und.edu/blgs



HAVING THE HARD CONVERSATIONS

National UND Aerospace symposium focuses on especially challenging topic: Mental health in aviation

In a time where mental health is more talked about than ever, one industry has been staying quiet, by most accounts: the aviation industry. But the Odegard School of Aerospace Sciences has been trying to spark those conversations, and the Aviation Mental Health Symposium was a schoolwide effort to do just that.

This past Wednesday and Thursday, individuals from multiple areas of the aviation industry gathered to “make new connections, explore new ideas and come away with action steps that can be implemented to normalize the conversation surrounding mental health and aviation,” said Elizabeth Bjerke, associate dean & professor of aviation at UND.

This is the first time this event has been hosted on campus, although UND also sponsored the first symposium, which was held in Chicago last December. “This year’s symposium brought together leaders from the FAA medical system, airline and union representatives, medical and mental health professionals, and several other universities to learn about and discuss issues regarding mental health in the aviation community,” said Robert Kraus, dean of the Odegard School.

More than 100 people attended in person and roughly 50 joined via video over Zoom. Attendees hailed from all over the world, thanks to the International Civil Aviation Organization promoting the event through the organization’s Mental Health Task Force. Many more people will be able to view the symposium via a permanent

YouTube link as well; watch UND Aerospace’s page on YouTube.com for more information.

The purpose of this event was both to shed light on the issues surrounding mental health in aviation, and also to exchange ideas on how to generate conversation and improvement industrywide.

The event consisted of two full days of panels, keynote speakers and discussions. The first day was meant to be a day of learning while the second was a day of discussion and action ideas. Some individuals who attended included UND’s Student Health Aviation Medical Examiner, a Human Intervention Motivation Study (or HIMS) Aviation Medical Examiner — meaning a specialist trained in evaluating airmen for substance-abuse, alcohol-related or other mental conditions — from the Mayo Clinic, the chief resident from the Department of Neurology in the Brooks Army Medical Center, and many more.

Each panel concluded with a question-and-answer session in which audience members, both in person and on Zoom, could ask questions about the topics discussed.

A Day of Learning

One panel on the first day centered on research and was moderated by Dr. William Hoffman, affiliated assistant professor of aviation at UND. Hoffman spoke about a research project he’ll be collaborating on at UND regarding mental health in collegiate aviation, an area that little research has been conducted in. “Research will likely be key when it comes to how we engage with the challenges aviation faces related to mental health in the years to come,” said Hoffman.

The symposium’s first day consisted of five panels as well as a keynote speaker, while the second day featured multiple breakout sessions where individuals could exchange ideas. Some of the topics discussed included future research ideas, peer support programs and the medical process.

Among the panelists on the first day were two UND students, Mark Volk Porter and Ryan Peene, and one UND alum, Emme Miller. Last spring, Miller had a vision for a

program at UND to help students in need. She put her idea into action by creating a peer support program called UpLift, and after Miller graduated in May, Peene and Volk Porter took over as chair and vice-chair.

A day of discussion and action ideas

The second day of the Mental Health Symposium concluded with the official launch of UpLift. The program is one of the first of its kind and won praise from multiple industry professionals at the symposium.

“I have high hopes for the future of UpLift, the newly launched peer support program at UND,” said Volk Porter.

“My main hope is that it becomes a tool for students to use to seek support when they need it most. During the conference, many presenters talked about early intervention and working through a problem early before it becomes a diagnosis, and I believe peer support programs are one of the most effective ways of doing that.”

Although peer support programs have been widely and successfully implemented at airlines, they’ve been slower to arise at the university level. But more recently, faculty members of aviation colleges nationwide have been inspired by airline peer support models as well as the UND students responsible for the creation of UpLift.

The Aviation Mental Health Symposium was made possible by the John A. Hauser Mental Health in Aviation Initiative Fund. Hauser was an aviation student at UND when he died by suicide in 2021. The fund was established by his family shortly after his death.



“These efforts will not only support UND students but also help establish a national model for best practices regarding mental health in aviation — a model that other flight training organizations can look to for guidance and program implementation,” Bjerke said.

In the future, Bjerke continued, the hope is “to use these funds to keep the national dialogue going and encourage collaboration. We want to use these funds to impact students at all universities in a meaningful way.”

— Mackinney Supola, UND Aerospace Marketing Intern



THE TRILINGUAL THERAPY DOG

Life on UND’s flight line is made a bit easier by Brita, a therapy dog sporting aviator goggles and a bomber hat

Nothing’s more relaxing after a stressful and exhausting flight lesson than sitting with a giant schnauzer in dispatch. Especially when that furry friend is Brita the therapy dog, a canine best known around UND Flight Operations for her old-fashioned aviator goggles and bomber hat.



A vertical green banner with white diagonal stripes at the top. It contains the text "Read the full UND Today story online!" followed by the URL "und.edu/blogs". At the bottom of the banner is a QR code.



Faces OF THE Industry:

DISCUSSIONS IN AVIATION DIVERSITY

“Sometimes it's enough to walk into the room and be the representation you have never seen, but sometimes, you have to take action.”

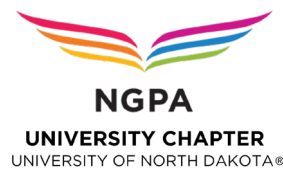
LAURA ACEVEDO
Captain, USAF



STUDENT LED



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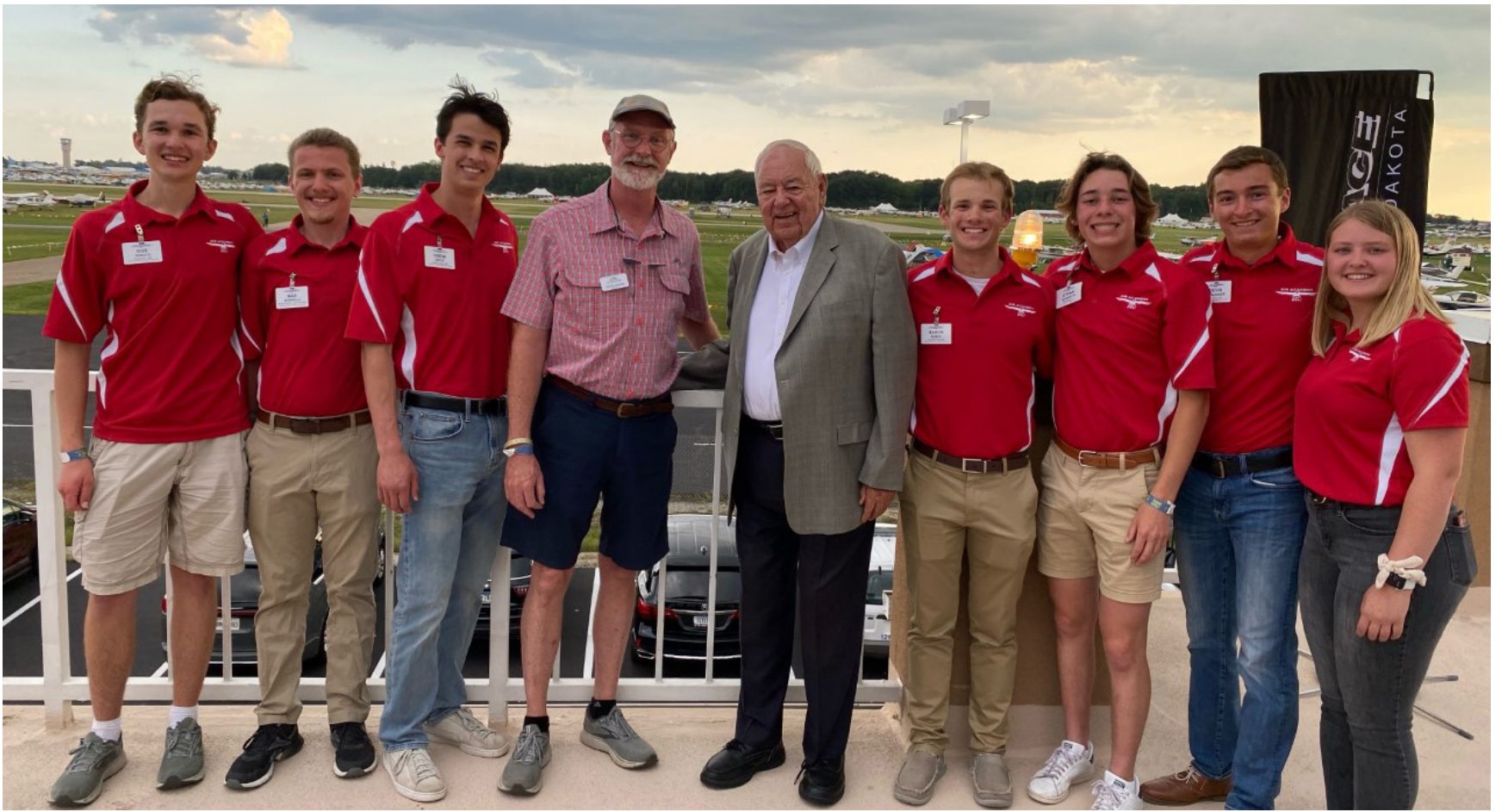
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STUDENTS INSPIRE NEXT GENERATION OF AVIATORS

For UND Aerospace students, being a summer aviation-camp counselor in Oshkosh, Wis., is hard to beat

Imagine watching a young person's face light up while you're piloting that person on their very first flight in a small plane. This is the experience UND senior Mikaila Gillis had more than 90 times over the summer, when she was working as an aviation-camp counselor.

Gillis and six other UND Aviation students had the chance to spend their summer sharing their passion for aviation with the younger generation. The UND students received either the Clay Lacy or Joe Clark scholarships in the spring, and as recipients of this scholarship, they had the chance to be camp counselors at the EAA AirVenture Summer Program in Oshkosh, Wis.

At the camp, the students dedicated two months of their summer to working with campers and encouraging youth involvement in aviation.

The EAA AirVenture Summer Program is an aviation-centered summer camp offered to high school students ages 12 to 18. Each student spent about a week at the summer camp.

This camp helps build future pilots and provides learning opportunities for all other

areas of aviation. The campers learn about aircraft manufacturing, aircraft accident investigation and flight simulators, among many other training and career options in the industry.

Archery? No. Aviation? Yes.

The counselors lived in a lodge located on the Wittman Regional Airport, the airport near Oshkosh that's the site of the annual Oshkosh Air Show. A typical day for these counselors was filled with teaching lessons, overseeing campers, flying and hearing from guest speakers.

Augustas Senuta, a counselor and UND student, particularly enjoyed his time spent teaching. "When you are talking about something you are passionate about and your audience is passionate about it as well, it becomes a really rewarding environment," he said.

Of the seven UND students, Mikaila Gillis was the only Certified Flight Instructor and spent much of her summer flying campers. Mikaila flew 90 students and logged more than 70 flight hours in a Cessna 162 Sky Catcher.

Not only did she help her students learn more about flying, but also she found the summer to be helpful for her personally. "It was rewarding," she said.

"It was a great experience to learn what flight-training operations are like, as well as to build some confidence and flight hours, too. Working with the kids and seeing their smiles and how excited they were when they got in the plane just made the whole experience worth it."

The summer marked a full-circle moment for two of the counselors, as Gillis and Ethan Kilmartin both had attended the weeklong program as campers before attending college at UND. Senuta, the UND student mentioned above, also had a connection to the program. "I personally got into aviation through the Young Eagles program, which is a part of EAA," Senuta said. "So, it was nice to be able to give back to this program and raise more Young Eagles and contribute to their passion for aviation."

World's largest air show

One of the busiest weeks of the summer was the week of the EAA AirVenture Show, also known as the Oshkosh Air Show. This is the world-famous annual event hosted by EAA at the Wittman Regional Airport. This summer, roughly 650,000 people attended the event, along with the youth campers in the EAA Air Academy Summer Program.

And besides exploring the air show with their campers, the counselors also had the chance to network with aviation professionals and to attend the UND Alumni Reception. They talked about how rewarding it was to reconnect with former flight instructors from UND who are now airline pilots.

All seven UND students spoke highly of the EAA Air Academy supervisors, Camp Director Scott Cameron and Workshop Director and Associate Counselor Julie Cameron. As one counselor put it, "We saw skills that they have that if we were one

"It was nice to be able to give back to this program and raise more Young Eagles and contribute to their passion for aviation."

AUGUSTAS SENUTA

Commercial Aviation Student

day to become a boss or a manager, we would want to have."

In addition to their experience over the summer, the seven students also received up to \$12,500 in scholarship money. "The scholarship was huge for me," said Aaron Bunce.

The seven UND students expressed how grateful they were to Clay Lacy and Joe Clark for their generous creation of the scholarship. Clark and Lacy both have long and impressive resumes demonstrating their piloting ability as well as their business and philanthropic endeavors.

While Clark passed away in 2020, Lacy attended AirVenture this year, and the counselors were very thankful to have been able to thank him in person at the UND Alumni Event.

One of the counselors spoke on how impressive the campers were and said, "We were really improvising to challenge these kids to learn more and to keep building off of their passion."

It was great to be a part of a program that helps young people discover their passions for aviation, the counselors agreed. Current UND students are encouraged to apply for the scholarship this year.

UND is grateful for the aviation community for creating opportunities like this one, UND Aerospace officials said. Joe Clark, Clay Lacy and their connections within the industry have opened doors for many aviators, the officials noted.

— Mackinney Supola, UND Aerospace Marketing Intern

From left to right, UND students (wearing red shirts) Augustas Senuta, Max Borrelli, Drew Beck, Aaron Bunce, Ethan Kilmartin, Devin Emslander and Mikaila Gillis stand with Chuck Ahearn and Clay Lacy at Wittman Regional Airport near Oshkosh, Wis. The students — beneficiaries of scholarships endowed in part by Clay Lacy — worked as counselors with the EAA AirVenture Summer Program over the summer.



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01



02



SPACE GRANT EDUCATORS FUEL LOVE FOR SCIENCE

NASA-backed workshop gives teachers tools, strategies to engage sensory-impaired learners

Tori McIntosh didn't have to dig too deep to recall that one special teacher or favorite mentor who had most inspired her along the way.

For McIntosh, program coordinator for the North Dakota Space Grant Consortium, that person was Mr. Zerr, who showed up at Harvey (N.D.) High her junior year.

"As a new science teacher, Mr. Zerr started a science club and brought a big fish tank into our biology class. That was like the highlight of the year," McIntosh said with a laugh. "I think that's what sparked my love for science. I had a teacher who showed me just how exciting it can be. Then there was the science club and the pet fish, and that was that."

She was hooked.

Fast-forward a few years, and the program coordinator (and UND graduate student) now is teaching other educators how to spark that same sense of curiosity and drive for discovery in their own students.

"We want to turn everyone on to science and space," McIntosh said. "Why would you want to leave anyone out when you're seeking answers to so many things? You never know when that someone might have the answers to everything."

In fact, the focus of the latest "NASA in the Classroom Workshop" was to show teachers how to incorporate universal design aspects into their lesson plans to make STEM subjects — science, technology, engineering and mathematics — more accessible for all students, including those who may be blind or deaf.

03





The workshop was hosted at UND and organized by Space Grant IDEAS teams from North Dakota, North Carolina and South Carolina. IDEAS, by the way, stands for Innovative Differentiated Education Activities in Space Science.

Photos

1. Educators create tactile models of space science topics such as planets, craters and comets.
2. Keynote speaker Troy Cline of the Johns Hopkins University Applied Physics Lab helps workshop participants explore “pinhole projectors,” which will allow students to safely view next year’s solar eclipses without looking into the sun.
3. Educators team up to create their own “impact crater mold” using dental material and spheres of varied textures and sizes. After the mold hardens, teachers can help their students explore the science behind the different types of craters.



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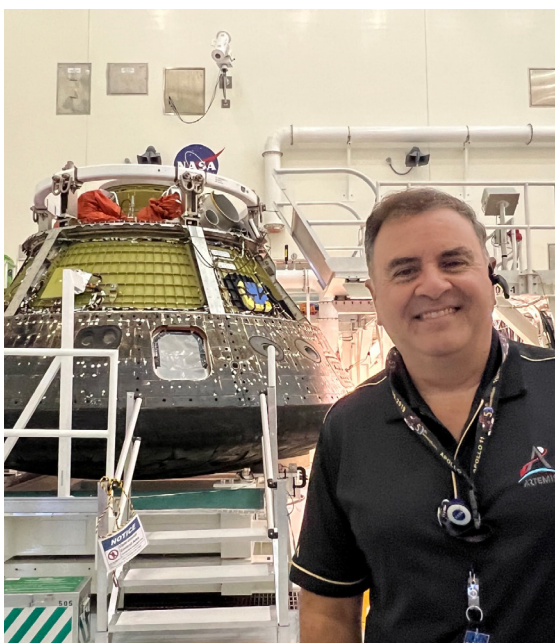
UND RECEIVES NASA RESEARCH GRANT

UND has received a \$650,000 grant to develop high-bandwidth communications networks to be used in space.

The grant was awarded by NASA through its Space Technology Research Grants Program, and was announced by Sen. Kevin Cramer, R-N.D., on Tuesday, Dec. 6. Funds from the award will be given out over the period of three years. Along with UND, nine universities across the nation have received funding to develop early-stage technologies with an eye toward future use. At UND, the research will take a multi-disciplinary approach involving the Engineering and Aerospace colleges.



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ARTEMIS 1

Dr. de León had the opportunity to visit the Artemis 1 capsule just back from the moon! (KSC-FL)



NASA SCRUBS COME FROM HARD LESSONS ON SAFETY

ND space scientist describes reasons behind space agency’s ‘high level of caution’



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MISSION COMPLETE: THREE UND ASTRONAUTS CONCLUDE MARS SIMULATION

Graduate students complete the 14th mission for UND Space Studies’ Inflatable Lunar-Mars Habitat



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AEROSPACE CONNECTIONS





Cover Photo: **Lydia Blume '18 & Dillon Voigt '21**
Broadcasting Meteorologists at WDAY in Fargo, ND.

1. **Paul Janowicz '16 & Zach Alsterlund** flew a CRJ900 aircraft from MSP to GFK to be used as a static display for the annual SAMA Conference at UND in April 2018. At the time, they were both flying for Endeavor Air. Today, they both fly as First Officers for Delta Air Lines.

2. **Captain Joel E Lehrke '84, First Officer Brand E Lindquist '92, First Officer Ryan MP Goheen '05** on a recent 787 flight UAL882 HND-ORD

3. **Karen Ruth '82 & John Dencker '93** were on a flight from London to MSP in October of 2022.

4. **Dr. Kavya '17 & Dr. Pablo de Leon** (chair of Space Studies) photographed with first PhD student in Space Studies. Together at the International Astronautical Conference in Bremen Kavya was showing Dr.Pablo how to dock the Starliner to the International Space Station.

5. General Atomics at the Grand Forks Air Force Base featuring alumni; **Elizabeth Worley '22, Megan Halek '15, Dean Gorder '84, Robert Weeldreyer '08, Nathan Kimber '08, Andrew Levine '13, Ryan McLean '05, & Alexander Volberding '17**

Not pictured; **James Carney '10, Michael Pierce '17, Trey Langaas**

6. **Bryan Shirota '08 & Jeremy Barayuga '09** With an A321neo before departure in Las Vegas. HA31 LAS-OGG in March of 2022.

7. **Lisa Ruedy '07 & Nathan Ruedy '06**, In the Embraer 175 at Compass Airlines, Minneapolis, in 2014. Nathan now flies for Southwest Airlines.

8. **Andrew Kubal '12 & Taylor Ortega '12** at Martha's Vineyard in May 2022, they were college roommates at UND and randomly got paired on a trip together at jetBlue.

9. **Andrew Rice '14 & Maggie Rice (McIntyre) '15** Were married in 2018. Maggie is currently a Hawker captain and the Director of Safety at SC Aviation.

10. **Captain Joey McNelis '14 & FO Ryan McNelis '03**, photographed with their father (pictured in the jumpseat) for Joey and Ryan's first time flying together SEA-LAS.

11. **COL Patricia G. Baker, Ed.D. '97 & Major General Shawn Manke '91**, MN Guard Adjutant General and both are UH60 aviators.

12. **Jill Kost '90 & Eric Kost '89**, Airway Science, jetway date in Atlanta. They have been married for 25 years. Jill is at United, and Eric is a Captain at Delta Air Lines.

SEND US YOUR ALUMNI PHOTOS!



LEADERS IN AEROSPACE



ELISE WHEELOCK '18

"Before attending UND, I grew up in the foothills of the Shenandoah mountains. I was always interested in flying. I was fifteen when my mom took me to my local airport (HWY) for a Women Can Fly event, where I took my first flight, sponsored by the 99's. Like many before me, I was hooked as soon as the wheels left the ground.

After that flight, I pursued aviation at full-speed. I got my private pilot's license after my junior year of high school, and my glider add-on the following summer. The whole time, I desperately researched aviation universities to find the best one – and fell in love with UND.

Arriving at UND as a freshman was exciting. I was surrounded by more aviation, more people my own age, more everything than ever before. Even now, many of my closest friends are people I met within my first week at UND. The opportunities felt endless – especially when I discovered the aerobatics team. The opportunity to experience aerobatics in college improved my flying skills. It also provided me with a network of professionals outside the university, and still gives me credibility as an aviator in my professional role.

UND excels at preparing graduates to be airline pilots. The part of the program that is entirely underrated, however, is the networking and connections available at for future general aviation professionals. I went to work as an intern for Piper Aircraft, Inc, after my second year at UND. After a short internship highlighted by flying to Oshkosh in a Seminole, I returned to UND with a job offer.

During the three years I spent at Piper, I got to fly three-quarters of the United States – giving demos and showing off the new Piper Pilot 100i. Low and slow is the best way to go. In 2021, I was offered a position as the Piper representative for the Pacific Northwest. I sell and support Piper airplanes in this part of the country. It's the best job in the whole world. I get to fly brand-new airplanes all over the PNW, meeting with prospective customers. These are successful people in many different industries who often have valuable lessons and experience to share.

This story isn't complete without the people who got me here. The women who convinced my mom it was safe to fly airplanes that first day. The mentors at the airport who took me up, the now-airshow pilot who hooked me on aerobatics, the glider club that taught me more about weather than I ever thought there was to know. Mike Lents and the aerobatic team, all the people we met at contests, who give me credibility and a huge network of friends and colleagues. The people who put me in the way of success, talked me through each decision, and helped me to get here. Thank you."



LYDIA BLUME '18

Rise and shine! Lydia is up and at 'em forecasting the weather on WDAY's First News weekday mornings.

She joined the WDAY team in January of 2018, took the reigns of weekend weather in May of 2018, and started waking up a whole lot earlier – to join the First News crew – in June of 2019. You can watch Lydia's forecasts from 5 to 7am Monday through Friday on ABC.

She put her passion for weather to use at the University of North Dakota where she obtained a Bachelor of Science degree in Atmospheric Sciences. Lydia was also a member of the Student Ambassadors, American

Meteorological Society, Weather Update, Studio One, and Gamma Phi Beta during her time at UND. She graduated cum laude in the spring of 2018 and then headed south to Fargo to begin her broadcast career.

Before making the move to Grand Forks, Lydia grew up in Redfield, South Dakota. Her love for weather blossomed early in life, as she watched storms rumble across the pastures on the family farm.

It was in high school that Lydia fell for Jon, her now husband. The two wed in August of 2020 and welcomed their son, Axel, in January of 2022. The three of them enjoy Fighting Hawk athletics, cooking new recipes, and traveling together.



COACH MIKE LENTS FLYING FOR TEAM USA 2023!



Every two years (2020 excluded), the top advanced aerobatic pilots from around the world gather and compete to determine which country (and which pilot) will be the World Advanced Aerobatic Champion. This event rarely comes to the United States.

I was honored to fly with the 2018 Team representing the US in Romania. Flying a friend and teammate's aircraft, I placed 5th overall, helping secure a Silver for Team USA. The generosity of friends and supporters made that achievement possible.

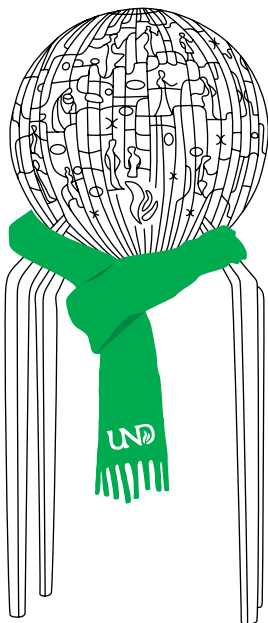
Competitive Aerobatics is a passion I share with my students at the University of North Dakota as an assistant professor, flight instructor, and coach. The training and experiences from competing at these world-level events will be passed on to future generations of pilots who I hope will also earn the opportunity to fly for Team USA in the future.

- Mike Lents



SUPPORT MIKE LENTS!

GoFundMe: Flying for Team USA 2023!



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Nearly 9,000 alumni and friends gave to support students at the University of North Dakota last year.

Will you join them by making a gift today?

Together, we create opportunities for future generations.



HELP STUDENTS TODAY

Use your phone's camera to scan this code and give online.

UNDalumni.org/greatest-need

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Commercial Aviation

ATHLETES \ \ \ \

IN FLIGHT

UNIVERSITY NORTH DAKOTA

IRENE JIRASEVIJINDA
Commercial Aviation

ALISHA MAAKE
Commercial Aviation

LOUIS JAMERNIK
Commercial Aviation

JACKIE ALBRECHT
Commercial Aviation

JOY CALLINAN
Commercial Aviation



We are #UNDproud of our student athletes who are not only champions on the ground, but also in the sky.

Go Fighting Hawks!

*Additional majors; Grace Heron: Aviation Safety and Operations and Sociology, Amanda Higginbotham: International Studies, Joy Callinan: UAS.



WHO LOVES SNOW MORE THAN AARON KENNEDY '11

This past fall, Associate Professor Aaron Kennedy travelled to Crested Butte, Colorado to deploy blowing snow instrumentation to field campaigns dedicated to understanding land-atmosphere interactions and the hydrological budget in a mountain watershed. Graciously supported by a Department of Energy award and the JDOSAS, the instrumentation will stay in Colorado over the winter season. After being retrieved this upcoming summer, the instruments will find homes (at least temporarily) in North Dakota to support blowing snow research.

Photography provided by Aaron Kennedy

Aaron Kennedy hauling lumber: The East River Watershed receives much more snow than North Dakota. Miniature decks were built to support instruments; an adventure when this meant hauling lumber up trails at 9300'!

1. The field sites were busy with activity; The National Center for Atmospheric Research (NCAR) installed multiple tall meteorological towers to support other researchers.
2. Two Open Snowflake Cameras for Research and Education (OSCRE) were deployed to provide ground-truth to radar and lidar observations at the sites.
3. These instruments are acoustic microphones that determine the amount of blowing snow by listening for the sound the particles make as they hit the hollow tubes.



02

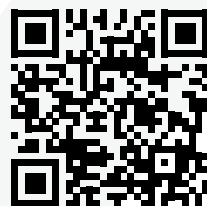


03



SPONSOR A WEATHER BALLOON

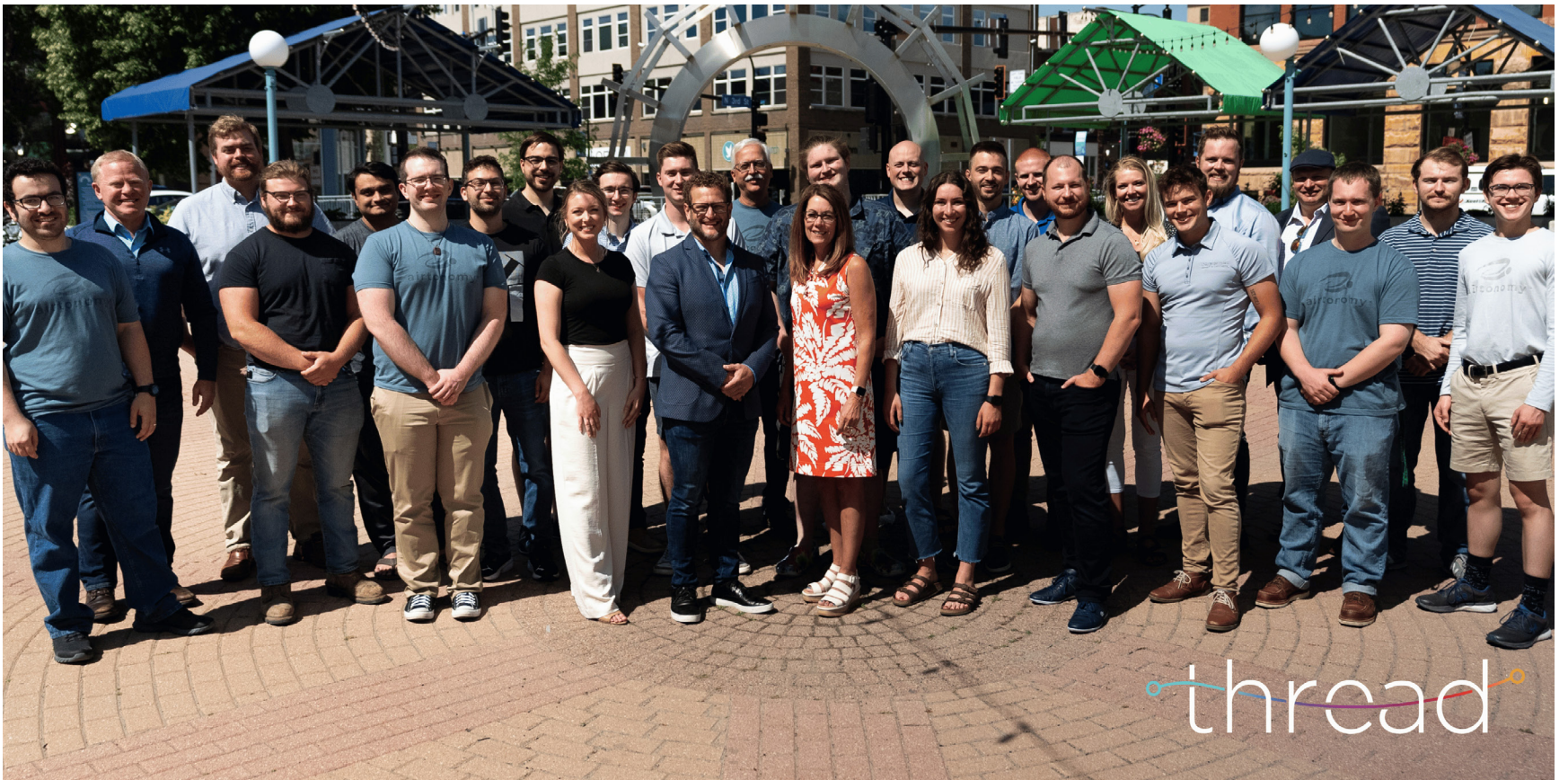
Your gift of any amount makes a significant impact on the Atmospheric Science Weather Balloon initiative.



Give today!

Scan the QR code or visit the link below.

<https://undalumni.org/weather-balloon>



THREAD, AN AUTOMATED INSPECTION TECHNOLOGY STARTUP, DEEPLY ROOTED IN UND

University of North Dakota (UND) graduate, Nick Zaccardi, has worked at Thread (formerly Airtonomy), an automated inspection technology startup, as the Chief Technology Officer since 2020. Nick earned his Bachelors of Science in Aeronautics in Air Traffic Control from UND in 2012. “My time at the University of North Dakota brought about an incredible sense of accomplishment.

“What UND does very well is create an environment that fosters learning. It allowed me the opportunity to try new things, fail in some cases, and most importantly meet people with the same passions. The connections I was able to build during my time spent at UND led me to my current role at Thread,” explains Zaccardi.

Who is Thread

Thread was founded in 2019 by University of North Dakota affiliated individuals including CEO Dr. Joshua Riedy, COO Dr. Jim Higgins, and Chief Computer Scientist Dr. Travis Dresell. Headquartered in Grand Forks, North Dakota, Thread is the leader of enterprise-scale autonomous data collection for delivering precise inspection insights across the energy industry.

Thread’s first of its kind automated asset inspection software delivers critical inspection data to enterprise scale companies, helping them to identify when and where inspections are required while eliminating the need for external service provider scheduling and costs.

“Thread is primarily a data technology company. We’ve developed a robust data and asset management platform that helps companies manage their inspection asset lifecycles in the renewable energy, oil and gas, utility, and military sectors, among other industries. Our technology enables enterprises to be more efficient, accurate, and scalable in the delivery of their asset inspections,” says Zaccardi.

“Truly a UND Story”

Thread founders and executives like Zaccardi are deeply rooted in the University of North Dakota and are proud to hail from UND. “The flow out of this is deeply rooted in the partnerships and friendships developed during my time as a student at UND. This truly is a UND story as Dr. Joshua Riedy was a former administrator, Higgins was Chair of the Aviation Department, and Desell was a faculty member,” shares Zaccardi.



Nick Zaccardi

Zaccardi first met Riedy when he was Riedy's student at the University of North Dakota in 2008. "Josh was doing groundbreaking work to involve students, and to connect students into the process. We formed a personal and professional relationship," shares Zaccardi.

In addition to the university itself, the University of North

Dakota Aerospace Foundation has played a critical role in Thread's success as an original investor and one of the largest benefactors to date. Zaccardi emphasizes, "a unique and remarkable aspect of Thread is that it's success directly benefits the UND Aerospace Foundation and thus the University of North Dakota itself. Meaningfully changing the lives of students, faculty and staff is something I dream of as a proud alum."

The Future of Thread

Thread is ranked in the top two for best tech startups in North Dakota in 2022 and continues to expand its workforce to more than 75 industry experts. The company

received one of the largest series A funding rounds in North Dakota history, and raised more than \$15 million to date. The funds will be used to expand its technology into other market sectors including both national and global markets.

Visit thread.one to learn more about Thread and how UND grads like Zaccardi are changing the future of automated intelligence.

— Mackinney Supola, UND Aerospace Marketing Intern



LEARN MORE ABOUT THREAD

Visit the website.
thread.one

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SCAN TO SHOP





UND AEROSPACE: GETTING THE LEAD OUT

UND Aerospace in partnership with Swift Fuels, leads the way by switching to unleaded aviation gasoline

UND Aerospace will be the largest public flight school in the nation to fully switch to unleaded avgas or aviation gasoline.

The fuel is called UL94 and is produced by Swift Fuels, a West Lafayette, Ind.-based research-and-design firm that develops fuel process technology and makes high-performance fuels. Swift Fuels is the sole producer of UL94 unleaded avgas, which will be used at UND in place of 100 octane Low Lead fuel, also known as 100LL.

The leaded fuel is currently being used by airports and flight schools across the country. Switching to unleaded avgas will help UND save money through reduced aircraft-maintenance costs, and is a “greener,” cleaner fuel than the existing legacy avgas.

“It’s exciting because we are looking at the future of general aviation,” said Robert Kraus, dean of the John D. Odegard School of Aerospace Sciences. “We’re looking at where we are going and how we are going to get there. Then we are looking at general aviation training and collegiate aviation programs. All of those are going to be affected by this in the long run.”

Chris D’Acosta, CEO of Swift Fuels LLC, said UND’s entire fleet of 100 aircraft are compatible with UL94. He said the agreement to supply UND with a fuel that reduces maintenance costs is a “win-win” situation. Eliminating lead exhaust emissions adds another dimension to that situation: “Let’s call it a win-win-win,” D’Acosta said.

“Swift Fuels is very pleased to be working with Dean Robert Kraus and the entire aerospace team from UND to bring about the benefits of our premium unleaded aviation gasoline,” he continued.

D’Acosta said using UL94 can significantly improve maintenance costs for UND aircraft, which will lead to improved productivity of student-pilots and flight instructors. Using 100LL means an aircraft engine must be serviced every 50 hours; in contrast, the unleaded avgas produced by Swift Fuels does not foul the engine with lead deposits. Additional maintenance benefits include doubling oil change intervals, reducing the frequency of sparkplug replacements and reducing incidents of mechanical issues and delays (from fouled spark plugs, for example) that might otherwise interrupt a flight training schedule.

Daniel Kasowski, manager of flight support services at UND, agreed with the maintenance benefits of using UL94. In 2021, UND technicians carried out more than 1,300 aircraft inspections, as part of a regular maintenance rotation. The new unleaded fuel can extend the interval period between those inspections by up to 25%, reducing the number of inspections by more than 270 per year.

Each inspection can take between 10-to-20-man hours to perform, which keeps the aircraft off the flight line for up to two days. Kasowski said the increased efficiency can save UND a “tremendous amount” of money.

“We’re going to reduce the downtime and reduce inspection time in the life of an airplane while still maintaining safety,” he said.

At present, 100LL is the most widely used avgas, but steps are being taken to look for cleaner fuels. D'Acosta lauded Kimberly Kenville, UND aviation professor, for her leadership in helping the aerospace industry find alternatives to 100LL. Kenville was among a group of scholars who sat on the Committee on Lead Emissions from Piston-Powered General Aviation Aircraft. In a project with the National Academy of Sciences, the committee compiled a congressionally mandated report titled "Options for Reducing Lead Emissions from Piston-Engine Aircraft" in early 2021.

The report noted that 100LL can be used in all kinds of piston-engine aircraft because of its high-octane rating, thus it is consistently available. UL94 is the only unleaded fuel that can be used in the kinds of aircraft that make up UND's fleet.

Since the use of lead was disallowed in automotive gasoline in 1996, leaded avgas has become the leading source of lead pollution in the nation. The report observes that lead is a highly toxic substance and that "there is no known safe level of lead in blood."

Kraus said that switching to an unleaded avgas makes UND a leader in pilot training both in terms of environmental stewardship, as well as cost-efficient operations of training aircraft.

"It's moving forward as a fleet to become more environmentally conscious," he said. "We want to continue leading collegiate aviation programs in this way."

— Adam Kurtz, *UND Today*

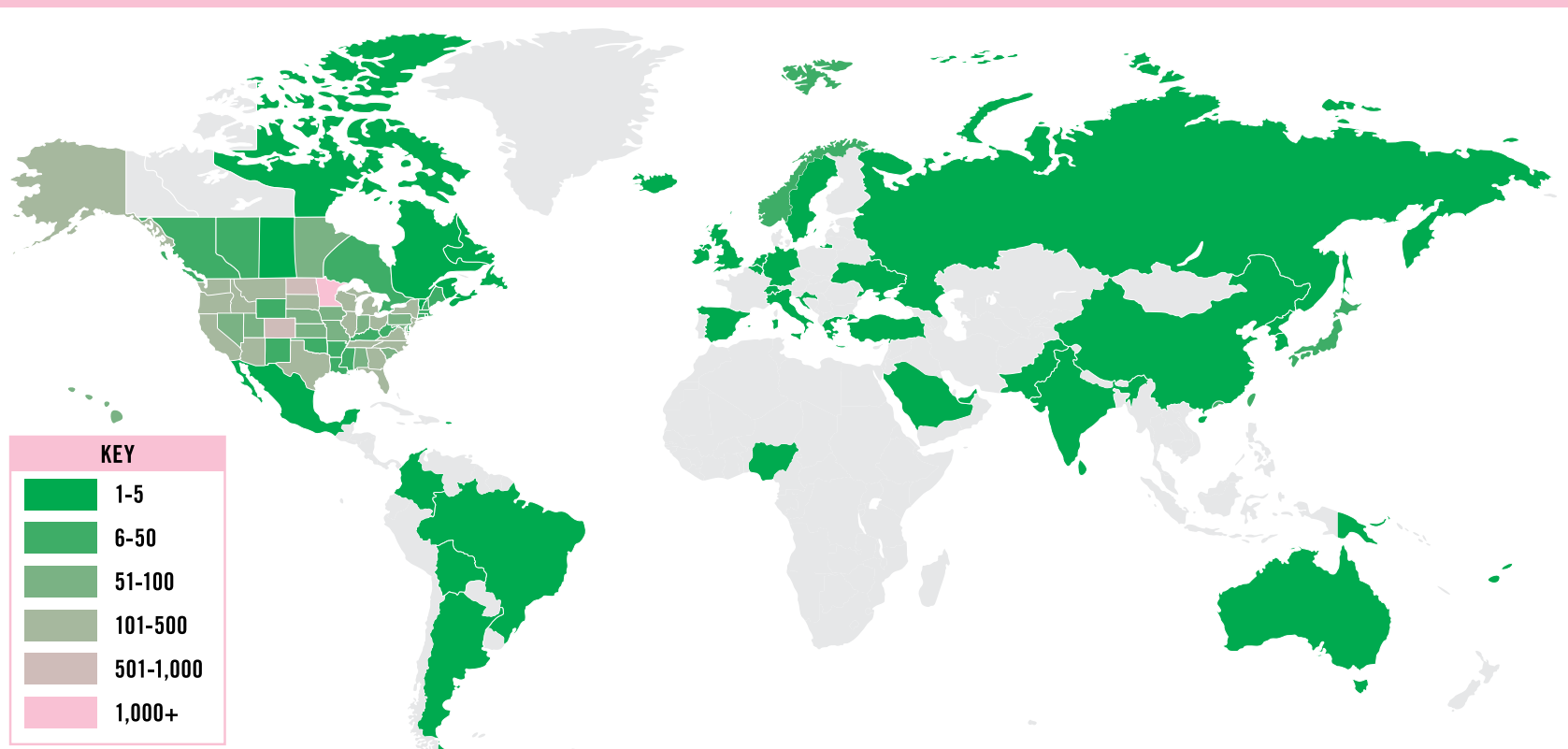
"We are still negotiating with Swift Fuels on the price per gallon of UL94 unleaded aviation fuel as the supplier ran into supply chain issues. This is a direct cost that is covered by the student and we want to ensure we are getting the best price per gallon so for now, we will still use 100LL while continuing discussions with Swift Fuels."

DICK SCHULTZ

Director of Flight Operations

WHERE ARE ALUMNI NOW?

2022



SUPPORT OUR COMPETITION TEAMS

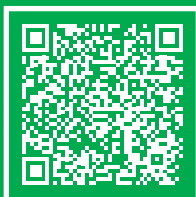
UND Aerospace has a long, proud history of competing at the national level through the National Intercollegiate Flying Association, International Aerobatics Club and the Air Race Classic. Our success on the national stage comes from our dedicated and hard working students, who often spend their own funds for practice and travel to events. Please consider making a contribution today that will directly go to our teams for added support. Also, make sure to follow them on social media as we kick-off the 2023 competitive season!



UNIVERSITY OF NORTH DAKOTA
FLYING TEAM
EST. 1966



UNIVERSITY OF NORTH DAKOTA
AEROBATIC TEAM
EST. 2002



UND FROZEN FORCE
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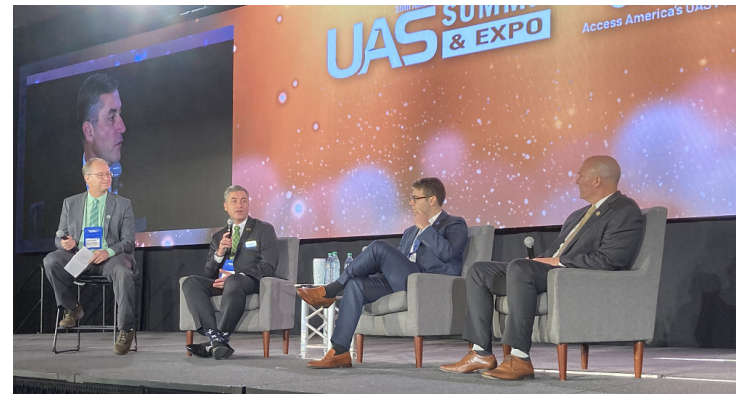
Contact Beth Bjerke, ARC Chair
elizabeth.bjerke@und.edu





AREA CHILDREN EXPERIENCE 'MIRACLE AT ROBIN HALL'

Event offers "great opportunity for UND Aerospace to interact with, educate and support" the region



FROM MONOCULTURE TO RICH UAS ECOSYSTEM

UAS's breathtaking growth in Grand Forks yields individual, institutional and national-security advantages, experts say



THE PRIDE HITS THEIR STRIDE

UND's marching band celebrates 25th anniversary. Pictured Sam Seidman, an aviation major from Los Angeles, Calif., in the 2022 Potato Bowl Parade

STUDENT-ATHLETE SPOTLIGHT

Amanda Higginbotham UND Dance & Commercial Aviation student



THE SKY IS NO LIMIT

From the Klosterman family come true tales of the air, starring UND-trained pilots who received the Annette Klosterman Memorial Scholarship



2022 FALL SAFETY SEMINAR

First time back in person since fall 2019. Although mandatory, it was record attendance. Take a look at that class photo! #SafetyKnowsNoSeason



UPCOMING EVENTS

FEBRUARY

7-10 | NGPA Winter Warm Up - Palm Springs, CA

23-25 | WAI Annual Conference - Orlando, FL

MARCH

6-9 | HAI Heli Expo - Atlanta, GA

APRIL

01 | UND Aerospace Saturday | Open House

20 | SAMA Conference - Grand Forks, ND

21 | SAMA Career Fair - Grand Forks, ND

20 | Atmospheric Sciences Banquet - Grand Forks, ND

22-23 | Aviation Family Weekend - Grand Forks, ND

MAY

13 | UND Spring Commencement - Grand Forks, ND

18-19 | PAPA - Las Vegas NV

20 | High School Drone Racing Competition - Grand Forks, ND

JUNE

16-20 | Air Race Classic Start - Grand Forks, ND

18 | UND Aerospace Camp 1

25 | UND Aerospace Camp 2

JULY

24-30 | EAA AirVenture - Oshkosh, WI

AUGUST

4 | UND Aerospace Commencement

9-11 | OBAP Conference - New Orleans, LA





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