TEST BEFORE FLIGHT
ARNOLD AIR FORCE BASE, TENN.

HIGH MACH

Serving the World's Premier Flight Simulation Test Complex

HAP ARNOLD'S LEGACY
AN AIR FORCE SECOND TO NONE

PRSRT STD
US POSTAGE PAID
TULLAHOMA TN
PERMIT NO. 29

Vol. 69, No. 4 | Arnold AFB, Tenn. | February 22, 2022

AFMC commander hosts virtual town hall from Arnold AFB

Jarrett Starbuck, a test analyst with the Hypersonic Systems Test Branch, Test Division, Arnold Engineering Development Complex (AEDC), speaks to Gen. Arnold W. Bunch Jr., commander, Air Force Materiel Command, about the Aerodynamic and Propulsion Test Unit at Arnold Air Force Base, headquarters of AEDC, Jan. 27. *(U.S. Air Force photo by Jill Pickett)*

By Bradley Hicks
AEDC Public Affairs

Coronavirus safeguards, efforts to bolster diversity across the Air Force Materiel Command and telework were among the topics broached by AFMC Commander Gen. Arnold W. Bunch Jr. during a Jan. 27 virtual town hall broadcast from Arnold Air Force Base.

The hour-long town hall, streamed via Microsoft Teams, was part of a visit made to Arnold last month. During his stop, Bunch also toured base facilities, met with leadership and presented coins to several team members.

Bunch opened the broadcast with a message for team members across the Arnold Engineering Development Complex, headquartered at Arnold AFB.

"Thank you," he said. "Thank you for what you do. You all are making a big difference."

Bunch focused much of his time discussing the ongoing COVID-19 and vaccination compliance. AFMC installations, including Arnold AFB, are presently operating under elevated Health Protection Condition levels.

See **TOWN HALL**, page 8

AFTC honors Black History Month: Raquel March

Col. John S. Hutcheson, commandant of the Defense Information School at Fort George G. Meade, Maryland, presents a Defense Information School Public Affairs and Communication Strategy Qualification Course graduation certificate to Raquel March, August 6, 2021. *(Courtesy photo)*

By Tiffany Holloway
AFTC Public Affairs

EDWARDS AIR FORCE BASE, Calif. – For the entire month of February, we are celebrating up-and-coming Black leaders within the Air Force Test Center. This week, we are highlighting Raquel March working out of Arnold Engineering Development Complex, Tennessee, with a question-and-answer session with Tiffany Holloway, AFTC public affairs director.

Tell me about yourself.

I'm a Middle Tennessean in residency, education and career. When I chose my major in communication at Tennessee State University, Nashville, I had dreams of leaving a small town and beginning a broadcast career in a large city. As my life became more guided by my Christian beliefs, "big city broadcaster" was not in my life path, but I wouldn't trade my path for any other.

I've been working in support of our nation's defense since 1994 when I started in public affairs at AEDC, headquartered at Arnold Air Force Base, near Tullahoma, Tennessee. I began my career in PA with the mission support contractor conducting tours and writing news releases. As my career progressed, I added skills that included managing the commander's access channel and marketing the complex by managing and attending technical conferences. Later, I became the base newspaper editor. By taking on different roles within the contractor PA office and because AEDC is so fascinating, it was difficult to become bored. There wasn't a time when I was only working in one focus area but multiple duties at the same time.

See **BHM**, page 8

National Engineers Week: Arnold engineers share insight on their career journeys, roles

By Bradley Hicks
AEDC Public Affairs

The importance of the roles engineers play at Arnold Engineering Development Complex has not diminished one iota in the more than seven decades since it was established.

From civil and mechanical to electrical and aerospace and just about every type in between, engineers continue to make up a significant percentage of the AEDC workforce.

AEDC engineers oversee the testing, conduct the research and manage the maintenance necessary for the complex to accomplish its critical Air Force mission. Now, it's time to celebrate these men and women, as well as other engineers across the country, for the impact they have on the world around them.

National Engineers Week, also known as EWeek, kicked off Feb. 20 and continues through Feb. 26. This annual celebration of engineers was established in 1951 by the National Society of Professional Engineers. According to that organization's website, EWeek was started to raise awareness of engineers' contributions to quality of life and to promote the importance of a technical education and a high level of math, science and technology literacy to parents, teachers and students. The goal is to motivate youth to pursue engineering and technology careers.

The theme for EWeek this year is "Reimagining the Possible." The NSPE is calling on everyone to celebrate engineers for the new possibilities they constantly create and how they work together to develop new technologies, products and opportunities that change how everybody lives.

To highlight their work at Arnold Air Force Base, the headquarters of AEDC, several engineers were asked to share what compelled them to pursue an engineering career, offer perspectives on how their work helps AEDC accomplish its mission and provide some insight on what it's like to be among those who reimagine the seemingly impossible to bring the possible to life.

James Dai

James Dai didn't want to "abandon" his degree in aerospace engineering, wishing to find a career in which his education and collegiate experience could be put to use.

In Arnold AFB, he found the ideal place to apply his skills.

"The work here is super unique. I'm working with the largest light gas gun in the United States," Dai said. "Because what we do is so unique and because of our mission to support the Department of Defense, I feel like I'm doing work that contributes something of value and I'm making a difference."

Dai is currently a test operations engineer in the rocket propulsion testing and ballistic range areas of the Space Test Branch. He has worked full-time under the Test Operations and Sustainment contractor for AEDC since September 2019. Dai was familiar with Arnold prior to this. He interned at the base during the summer of 2018, working in the J-6 rocket test cell to accurately model and propose improvements to components of the J-6 test stand.

He earned his Bachelor of Science in aerospace engineering from Ohio State University in May 2019.

The work of the team Dai is now a part of, which is responsible for maintaining and operating test cells, includes some mechanical design, system engineering, project engineering and analysis.

"You don't always know what's coming," he said. "You may need to learn more about something you're unfamiliar with. It's your job to adapt to whatever comes along to make sure the test goes off as planned and you achieve the objectives the customer had for the test while keeping the test cell safe and operable."

The ability to make adjustments on the fly is important, as test projects vary from customer to customer and test requirements change often.

"Of course, the field of engineering is always changing. That's what we do – we try to create and improve things," Dai said. "Being adaptable and going with the flow is important in this job. It definitely is a unique experience working here."

Dai said the most interesting challenge he has

See **ENGINEERS**, page 5

In This Issue....

HIGH MACH
Arnold Air Force Base

Col. Jeffrey Geraghty
Commander

Jason Austin
Chief,
Public Affairs

Richard Tighe, Ph.D.
General Manager,
National Aerospace Solutions

High Mach Staff:
Darbie Sizemore
NAS Executive Editor

Jill Pickett
NAS Editor

High Mach is published by Lakeway Publishers, Inc. a private firm in no way connected with the U.S. Air Force, Arnold Air Force Base, Arnold Engineering Development Complex (AEDC) or National Aerospace Solutions (NAS), under exclusive written contract with NAS at Arnold AFB, Tenn., 37389.

Everything advertised in this publication will be made available for purchase, use or patronage without regard to race, color, religion, sex, national origin, age, marital status, physical handicap, political affiliation or any other nonmerit factor of the purchaser, user or patron.

The *High Mach* office is located at 100 Kindel Drive, Suite A236, Arnold AFB, Tenn. 37389-1236. Editorial content is edited and prepared by NAS. Deadline for copy is Wednesday at close of business one week before publication.

This commercial enterprise newspaper is an allowable NAS contractor publication for personnel at Arnold AFB.

The content of *High Mach* does not necessarily reflect the views of the Air Force, Arnold AFB, AEDC or NAS. The appearance of advertising in this publication does not constitute endorsement of the products or services advertised by the Department of Defense, the Department of the Air Force, Arnold AFB, AEDC, NAS or Lakeway Publishers, Inc.

For general information about *High Mach*, call 931-454-5655 or visit www.arnold.af.mil.

Use High Mach to market your products and services. Contact Joe at 931-455-4545 or *jmartin@tullahomanews.com*

Core Values

- *Integrity first*
- *Service before self*
- *Excellence in all we do*

Vision

"NAS delivers the best aerospace testing capabilities today and in the future."

Values

- Ethics. We are uncompromising in our integrity, honesty, and fairness.
- Safety & Health. We are relentless in keeping people safe from harm, and we provide a safe and healthy work environment.
- Security. We are disciplined and vigilant in protecting sensitive AEDC information and ensuring system integrity to support national security and our customers.
- Excellence. We thrive on challenge, accomplishment, and mission success.
- Quality. We are passionate about doing our work right the first time.
- People. We have a mission-focused, inclusive workforce who have a diverse skill set, are committed to success, demonstrate innovation and have a can do attitude.
- Culture. Our team is proud of our diversity, inclusiveness, and collaborative work environment. We are proud of what we do and how we do it.
- Relationships. We build positive, long-term business relationships through trust, respect, and collaboration.
- Innovation. We overcome challenges through creativity, perseverance, technology, and flexibility. We actively seek to continually improve.
- Sustainability. We plan and act for the long term benefit of our communities and our environment.

Beyond the speed of sound: digital engineering is enabling the future

By Michael Glennon
AEDC Technical Management

Arnold Engineering Development Complex, or AEDC, has had several senior leaders visit recently, such as Gen. Arnold W. Bunch Jr., commander, Air Force Material Command, and Maj. Gen. Evan Dertien, commander, Air Force Test Center, who have emphasized the value of digital engineering. Chief of Staff of the Air Force Gen. Charles Brown Jr.'s statement "Accelerate, Change or Lose" is the core driver for why we must change as our adversaries are leveraging innovation and technological advances in developing aerospace systems.

Our acquisition programs are faced with shortening the acquisition cycle time as adversaries are now capable of iterating faster. Digital engineering is widely seen by senior leadership as a key technology that enables the change required to accelerate weapon system development.

Over the past 18 months, the AEDC Technical Management Office, with support from the Integrated Analysis Branch, Test Support Division, and the 704th Test Group, has enabled the planning stages in identifying how digital engineering may be leveraged to improve AEDC test and evaluation, or T&E, and develop a plan for the future.

Progress includes identifying and submitting digital engineering capability gaps to the AFTC knowledge management portfolio reliance panel, creating an integrated requirement list for planning and budgeting, and establishing a program objective memorandum request for funding and manpower starting in fiscal year 2024.

The AEDC Engineering Board has established a digital engineering working group to discuss, coordinate and foster digital engineering emerging technologies and approaches across the complex.

The digital engineering working group is an active participant in the recurring AFTC and Air Force Research Laboratory, or AFRL, Summit discussions and part of several topic of concern panels connecting AEDC to the bigger digital environment initiatives with specific outreach to earlier testing efforts.

AEDC has seen several successes toward advancing our digital engineering capabilities during this past year, to include stronger collaborations with our AFRL counterparts in areas which include data management, infrastructure, business processes, tools and concepts, such as "Test as a Service."

AEDC has been supporting weekly meetings with the other AFTC test wings which have been very successful in bringing together concepts for common architectures and data sharing.

AFTC is in the process of forming multiple supported programs in the cloud environment such as Platform One; GITLab open source code repository and collaborative software development platform; Visible, Accessible, Understandable, Linked, Trusted; and others.

In addition, an effort is underway for improved and more expeditious common software tools approval process throughout AFTC allowing AEDC to connect and digitize; optimize operations; and to innovate and scale efforts with our stakeholders.

The AEDC digital engineering working group is leading an integrated digital environment effort, or IDE, which defines a digital strategy roadmap for test business, test execution, test analysis, and modeling and simulation requirements. This spans the entire infrastructure, process and tools required to execute test and evaluation at AEDC. The digital engineering working group is reviewing local, AF, DOD and cloud infrastructure data-driven development and decision making processes for the purpose of making test and evaluation more collaborative and value added to acquisition programs and testpartners.

Many challenges remain to assess what is possible and scalable to larger IDEs which are being proposed at the AFTC, Air Force Materiel Command and Air Force levels.

At AEDC, we have projects in planning stages as well as pilot projects supporting the Air Force's digital engineering efforts. Some of these include the Common Test Data Storage System; 16T Flight Cloud and expansion; asset performance management pilot; condition based management pilot; Standalone Cloud Hybrid Edge-to-Enterprise Evaluation and Test Analysis Suite prototype; and the potential cloud usage of T&E databases; common tools and analysis software; and business system integrations activities.

The AEDC team that participated in the November 2021 AFTC and Air Force Operational Test and Evaluation Center, or AFOTEC, Data Hackathon took a local problem set, "A versatile open standard with a robust metadata capability," and was allocated four days to discover possible solution sets. This team of 10 AEDC engineers and scientists from across several AEDC organization utilized the hierarchical data format 5, or HDF5, open source standard to capture necessary metadata details, improve the efficiency for sharing data, and reduce the number of AEDC test cells data formats. This tool fully supports Python and Matlab, and other current programming tools as well as outputs to a binary format with built-in compression capabilities.

This team successfully enabled change, defined the data fusion problem and produced a proposed HDF5 standard. The "AEDC Data Wrangling Team" was recognized as the "most impactful" solution for the AFTC Data Hackathon as determined by the AFTC Leadership panel.

The next event is scheduled for March 14-18. AEDC plans to expand to two teams in the next AFTC and AFOTEC Data Hackathon event. The Team will work to solve current AEDC problem sets utilizing both local and cloud-based digital environments. If you wish to get involved with the data science movement please contact ***AEDC.CT.WORKFLOW@us.af.mil***.

If this kind of work is interesting to you, you should join the AEDC digital engineering working group and be part of the "Coalition of the Willing." The team will continue seeking out new opportunities and innovative ideas for advancing T&E capabilities, and foster the change required to be viable in an enterprise with accelerated acquisition cycles. Digital engineering increases our value to our test partners and keeps AEDC second to none.

NASA Astronauts speak to Team AEDC

Left, Victor Glover, a NASA Astronaut and commander in the U.S. Navy, and right, NASA Astronaut Dr. Stanley Love, answer questions about NASA and their experiences during an Arnold Engineering Development Complex Commander's Call, Dec. 20, 2021, at Arnold Air Force Base. Glover expressed appreciation for the ground testing efforts by Team AEDC which support NASA missions. ***(U.S. Air Force photos by Jill Pickett)***

Smoking Policy

1. The following revised Arnold AFB smoking policy is effective immediately and applies to all individuals on Arnold AFB.
2. Traditional Tobacco products (e.g. cigars and cigarettes):
   a. Smoking is permitted solely in Designated Tobacco Areas (DTAs) identified by designated signage. If no signage exists, smoking is not permitted in that area. It is the responsibility of all smokers to keep DTAs clean of cigarette butts.
   b. Tobacco use on the Arnold AFB Golf Course is permitted, but discouraged based on the health hazards of tobacco use and secondhand smoke. No smoking is permitted within 50 feet of golf course buildings except in the approved DTA.
   c. Smoking in government-owned/leased vehicles is strictly prohibited. Personnel are allowed to smoke in their personal vehicles at any time; however, at no time will personnel discard cigarette butts outside their vehicle.
   d. For government employees, the fact that a person smokes has no bearing on the number of breaks they may take. Breaks should be taken in accordance with the current supervisory and personnel policies that afford all employees the same break opportunities consistent with good work practices and accomplishment of the mission.
3. Smokeless Tobacco products (e.g. snuff and dip):
   Smokeless tobacco products are not to be restricted to DTAs. Smokeless tobacco use will be permitted in all workplace areas (inside and out) subject to reasonable safety and sanitary conditions. Specifically, containers of tobacco waste product, including sealed containers, must not be left unattended or disposed of in trash receptacles. Users of smokeless tobacco must flush tobacco waste down the toilet.
4. Electronic Cigarettes (also known as "e-cigs"):
   Pursuant to Air Force Instruction (AFI) 40-102, Tobacco Free Living, e-cigs are considered to be equivalent to tobacco products; however, e-cigs are not restricted to DTAs and are allowed to be used outdoors at a minimum distance of 25 feet from building entry/egress points. (This policy is dated July 27, 2016)

Action Line

Team AEDC,

I believe in free and open communications with our Team AEDC employees, and that's why we have the Action Line available. People can use the Action Line to clear up rumors, ask questions, suggest ideas on improvements, enter complaints or get other issues off their chests.

The Action Line has been expanded to include an option for your ideas, comments, or suggestions on the AcqDemo personnel system. Simply call the normal x6000 commander's action line. You will then be prompted to select option 1 for the Commander's Action Line or Option 2 for the AcqDemo line. They can access the Action Line via the AEDC intranet home page and by calling 931-454-6000.

Although the Action Line is always available, the best and fastest way to get things resolved is by using your chain of command or by contacting the organization directly involved. I encourage everyone to go that route first, then if the situation isn't made right, give us a chance.

Col. Jeffrey Geraghty
AEDC Commander

AEDC personnel honored with annual awards ceremony

Winners of Arnold Engineering Development Complex annual awards and Air Force Test Center Contracting annual awards pose for a photo with AEDC leadership Feb. 11 after the awards ceremony at Arnold Air Force Base. *(U.S. Air Force photo by Jill Pickett)*

Arnold Engineering Development Complex Commander Col. Jeffrey Geraghty honors annual awards winners Feb. 11 at Arnold Air Force Base. *(U.S. Air Force photo by Jill Pickett)*

By Jill Pickett
AEDC Public Affairs

Arnold Engineering Development Complex leadership honored military and civilian government annual award winners and nominees during a ceremony Feb. 11 at Arnold Air Force Base. The ceremony was also broadcast on Microsoft Teams, with the 704th Test Group also holding an in-person ceremony at their location.

The award recipients are:

- Maj. Bradley Breaux, *Field Grade Officer of the Year*
- 1st Lt. Christopher Kessel, *Company Grade Officer of the Year*
- Master Sgt. Oscar Vega, *Senior Noncommissioned Officer of the Year*
- Tech. Sgt. Patrick Gibbs, *Noncommissioned Officer of the Year*
- Staff Sgt. Rodrigo Noriega III, *Airman of the Year*
- Alexandra Wolfe, *Civilian Category I*
- Wesley Patterson, *Civilian Category II*
- Lee Powell, *Civilian Category III*
- Molly Oates, *Non-appropriated Fund Civilian Category I*
- Eric Hopp, *Non-appropriated Fund Civilian Category II*
- CAF Modernization Team – *Annual Exceptional Innovator*

This team consists of: Steve Arnold, Seth Beaman, 1st Lt. Ryan Blount, Jeff Chandler, Rich Darago, Capt. Bryan Gatzke, Bryon Harrington, Tyler Holes, Eugene Klingensmith, 1st Lt. Greg Landrum, 2nd Lt. Paul McCormack, Ron Munn, Joel Nalin, Nicole Prieto, Lewis Pumpelly, Jillian Sears, Justin Thomas and Josh Tuckey.

- 16S High Mach TACAIR Team – *Annual AEDC Technical Achievement Award*

This team consists of: Lt. Col. Wesly Anderson, Mark Andrews, Lance Baxter, Troy Bisby, Marcus Conner, Adam Fanning, Barrett Guenthoer, Ben Holton, Mike Lazalier, Ron Lutz, Tyler McCamey, Lt. Col. John McShane, Josh Meeks, Scott Meredith, Melissa Minter, Ben Mills, Kristyn Nivins, Nathan Payne, Rebecca Rought, Calain Schuman, Josh Webb and Joe Wehrmeyer.

Members of the Contracting team that supports AEDC, known as AFTC/PZ Arnold, which won AFTC Contracting annual awards for fiscal year 2020, were also recognized during the event.

Those award recipients are:

- Christopher Fanning, *Outstanding Civilian in Enterprise Contracting (Supervisory)*
- Randy Wroten, Outstanding Directorate of Contracting, *Civilian Category II*
- Test Operation and Sustainment Team, *Outstanding Enterprise Contracting Unit, Small*

The 2021 AEDC winner of the Lt. Gen. Leo Marquez Award, Senior Master Sgt. Matthew Romero, was also recognized during the ceremony. He has won at the Air Force Test Center level and is now competing at the Air Force Materiel Command level.

Pictured is a prescribed fire, or controlled burn, at Arnold Air Force Base. Prescribed fire is the most efficient and economical tool when managing natural ecosystems, allowing land managers to alter and improve the native ecosystems without utilizing more costly methods such as bush hogging, under brushing, and herbicide applications. *(Courtesy photo)*

Spring prescribed fire season is approaching at Arnold AFB

By Brenton Berlin
Arnold AFB Forester

Prescribed fire is the most efficient and economical tool when managing our natural ecosystems.

It allows land managers to alter and improve the native ecosystems without using costly methods such as bush hogging, under brushing or herbicide applications, which can also have long term negative effects on soils and waterways.

The majority of prescribed fire operations at Arnold Air Force Base occur from March through May. During this timeframe both weather and fuel conditions are generally conducive to accomplishing the prescribed fire management goals of the Arnold AFB.

Arnold AFB has three primary management goals for which prescribed fire is the best tool: manipulating structure type, competition control and fuels reduction. Arnold AFB utilizes prescribed fire to improve, maintain or sometimes completely change the structure or composition of the landscape.

All of the ecosystems at Arnold AFB, from forests to grasslands, are perpetuated by disturbance regimes. Disturbances can be natural or manmade. Some examples of natural disturbances include major storm events, fires, floods, insect infestations or natural mortality, while manmade disturbances include timber harvesting, land clearing, mowing or herbicide applications. Prescribed fire allows land managers the ability to mimic a natural disturbance which our native ecosystems have adapted to over time.

Arnold AFB currently uses prescribed fire to create and maintain habitat for rare, threatened and endangered species, such as the Henslow's sparrow in grassland ecosystems. Prescribed fire is beneficial in many ecosystem types as there is normally a flush of regeneration on the forest floor in the following years that provides low browse, cover, nesting areas and other benefits for turkey, deer and a variety of other wildlife species. The use of prescribed fire promotes new growth by removing dead vegetation and suppressing undesirable woody species that could eventually dominate the forest in the absence of fire.

Prescribed fire is also useful for competition control on sites where the desired species is fire tolerant. It is used in the pine plantations of Arnold AFB to control the encroachment of hardwoods and other undesirable species. For example, loblolly pines in the pine plantations tolerate much higher fire intensity than the undesirable species. Burning through the pine plantations can reduce hardwood competition, reduce fuel loads and improve wildlife habitat, while not harming the pine trees being grown for timber production.

Arnold AFB uses prescribed fire for fuels reduction for two main reasons. One is to reduce fuels to help lower the chances of a wildfire. The second is to reduce the intensity and rate of spread of a wildfire if it does occur. Low fire intensity and rate of spread make it easier for firefighters to contain a wildfire. Fuels reduction is accomplished by periodically using a low intensity prescribed fire to consume dead fuels, such as leaves, broken branches, dead grasses and other timber litter. The goal of reducing fuels with prescribed fire is to not kill the forest overstory, but to burn up accumulated fuels on the forest floor to decrease the chances and severity of a future wildfire.

Proper utilization of prescribed fire is both art and science, as it takes a combination of fuel conditions, weather conditions, smoke management, ignition techniques and timing to result in the appropriate fire intensity to accomplish site specific management goals.

If you happen to be traveling near an active prescribed fire at Arnold AFB always keep a safe distance. Please refrain from stopping along roadways or intersections near the prescribed fire as this can cause a dangerous situation for wildland firefighters and other motorists.

For more information contact the Arnold AFB Natural Resources Manager at 931-454-3230.

DAF leadership hosts Black History Month Observance event

By Secretary of the Air Force Public Affairs

Air Force Chief of Staff Gen. CQ Brown, Jr. listens to remarks from Wanda T. Jones-Heath, right, principal cyber advisor for the Department of the Air Force, during a livestreamed event at the Pentagon celebrating Black History Month, in Arlington, Va., Feb. 9. The event featured Airman and Guardian stories and a tribute to Brig. Gen. Charles McGee, a Tuskegee Airman who died Jan. 16. *(U.S. Air Force photo by Eric Dietrich)*

ARLINGTON, Va. (AFNS) – Department of the Air Force senior leaders hosted a virtual event Feb. 9 to celebrate the contributions of Black American Airmen and Guardians throughout the history of the department.

Speakers included Secretary of the Air Force Frank Kendall, Air Force Chief of Staff Gen. CQ Brown, Jr., Chief of Space Operations Gen. John W. "Jay" Raymond, and Department of the Air Force Office of Diversity and Inclusion director, Marianne Malizia.

"This is an opportunity for us to celebrate (and) also an opportunity to dedicate ourselves to continue a journey that America as a whole … has been on for a long time," said Kendall. "Too much of the Black experience in America has been about inequality and injustice, but that journey has also been characterized by courage, persistence in the face of great odds, (and) intellectual and artistic brilliance … things that we can all, as Americans, be proud of and celebrate."

During this event, Airmen, Guardians, and DAF civilians shared their personal stories of overcoming adversity and also spoke about how the department works to provide a culture and lifestyle that enables people from all backgrounds to succeed.

"I want to do things that are going to make a difference, so that's my goal here with the Secretary, to make a difference for all our Airmen, no matter their background," said Brown. "If there's one thing I've learned, your opportunity and the opportunity for all of us is now. It takes determination and preparation for all of us to have an impact and change history, so when the opportunity knocks, you want to be fully ready."

The Department of the Air Force Black History Month event was a celebration of the heritage and achievements of Black American Airmen and Guardians. It was also an opportunity to reflect on adversity and other disparities that exist within the Air and Space Force and what is being done to address them.

"We have a saying that 'Space is hard,' that space demands the best our nation has to offer and from the very beginning Black Americans have been absolutely critical to our nation's success as a spacefaring nation," said Raymond. "The Space Force is committed to building a diverse and inclusive service. It's the right thing to do, but it's also what the Space mission demands. We need the best and the brightest to meet challenges and protect our nation's security."

Concluding the event, there was a special presentation commemorating trailblazers, senior leaders, and other influential individuals who recently passed away. This offered attendees a chance celebrate those who have served as role models and influenced Airmen, Guardians, and the Department of the Air Force for years to come.

"I can promise you as your Secretary, that I and the rest of our leadership will be laser focused on making sure our department is more inclusive for all races, genders and ethnicities," said Kendall. "Undersecretary (of the Air Force Gina Ortiz) Jones, (General) Brown, (General) Raymond, and all the leadership team will strive to ensure our department-wide policies address the disparities we recognized in the disparity reports that we published. I hope that by recognizing, respecting, and understanding the different perspectives and experience that each Airman and Guardian brings to the fight, we will be able to find new and better solutions to the complex challenges we face as the 21st Century warfighting force."

The event can be viewed at ***https://www.facebook.com/USairforce/videos/359506645695674***.

Legal Office offers tips to prevent credit card theft, safeguard information

By Staff Sgt. Jordan West
66th Air Base Group Office of the Staff Judge Advocate

HANSCOM AIR FORCE BASE, Mass. – From traditional theft to illegal devices placed on ATMs to steal card information, thieves have crafted numerous tactics to unlawfully obtain information from cardholders.

Credit card theft can impact anyone at any time, and officials say that consumers could see up to $12.5 billion in losses due to fraud by 2025.

Below are examples of how thieves can gain access to sensitive information and ways to prevent it.

Thieves can gain access by:

- "Skimming" credit card information using self-made scanners at gas pumps and ATMs.
- Stealing cards or finding lost cards.
- Calling about fake prizes and awards.
- Stealing mail.
- Phishing attempts.
- Misappropriation by stealing card information and making purchases that don't require a physical card, such as online purchases.
- Fortunately, there are preventive steps that personnel can take to safeguard personal information and money.

Safeguarding Tips:

- Set up alerts. Most card issuers have an option to use alerts such as, "alert me anytime there is a transaction without my card present."
- Avoid entering sensitive information on public computers and Wi-Fi. When necessary, use a VPN connection.
- If using a smart phone as a mobile wallet, protect it as such.
- Don't allow websites to save your card information.
- Check your account frequently to be aware of suspicious activity.
- Always use a chip reader when available.
- Review credit reports regularly.

If you believe you are a victim of theft or fraud:

- Dispute unauthorized transactions.
- Report the incident to law enforcement.
- Consider placing a fraud alert on your credit file.
- Obtain a copy of your credit report. The three major credit bureaus provide a free annual report.
- Consider placing a security freeze on your credit report.
- File a complaint with, or report the situation to the Federal Trade Commission and attorney general's office.
- Close affected accounts.

Being a victim of credit card fraud can be extremely stressful, but practicing the tips provided above can mitigate the risk.

ENGINEERS *from page 1*

James Dai

Jennifer Doan

Jacob Floyd

Will Garner

Nissa Schuman

Ron Shumpert

Daniel Soderquist

faced thus far in his AEDC career involved the reactivation of a dormant test cell. He was tasked with serving as test operations engineer in Range S, one of AEDC's high velocity ballistic ranges, which had been inactive for several years and was needed to complete a customer test.

"That allowed me to go through the entire process from test planning to execution to post-test," Dai said. "We only had one craft person who was there when we last tested in S Range, so we all had a lot of learning to do together. But we did it."

Jennifer Doan

As Jennifer Doan pointed out, it is quite impossible for one to look around and find something that has not been touched by an engineer. This observation inspired Doan to pursue a career in engineering.

"I wanted to put my energy into building the world around me," she said.

Doan has worked at Arnold for nearly seven years. For the past seven months, she has served as an integrated project team, or IPT, lead. Doan, who works under the Technical Management Advisory Services contractor for AEDC, said her post entails providing a layer of quality assurance to identify and help mitigate risks before they become issues. She also provides routine project status updates on a timeline determined by the IPT and Air Force while providing information up the Air Force chain on a real-time basis. Furthermore, Doan tracks key performance indicators at the subproject level and is involved in the writing of technical documents.

Doan, who earned her Bachelor of Science in mechanical engineering from the University of Notre Dame and her Master of Business Administration from the University of Tennessee at Chattanooga, began her career at AEDC as a design engineer. Before taking on her current role, she held an analyst position.

"Working at Arnold can be very interesting and exciting," Doan said. "One can really feel a sense of purpose here."

Jacob Floyd

Jacob Floyd sought a career that would be both fulfilling and challenging.

Mission accomplished.

Just shy of his fifth anniversary at Arnold, Floyd is currently an instrumentation and data systems engineer developer in the Air Force Research Laboratory von Kármán Gas Dynamics Facility Wind Tunnel D. In this role, Floyd supports AFRL researchers stationed at AEDC by providing instrumentation and data systems expertise for new and ongoing hypersonic research campaigns. He is also responsible for operating and maintaining the instrumentation data system along with support for test article instrumentation.

Previously, Floyd, who works under the Technical Management Advisory Services contractor for AEDC, worked as an enterprise data systems engineer for the AEDC enterprise system for test data acquisition. Prior to that, he worked as instrumentation engineer for the 16-foot transonic wind tunnel in the Propulsion Wind Tunnel facility.

"Every day at Arnold is different and holds new challenges," Floyd said. "In my short five years, I have had the privilege to hold multiple positions in several world-class facilities, all while building great relationships that will persist through time."

Floyd earned his Bachelor of Science in computer engineering from the Electrical and Computer Engineering Department at Tennessee Technological University.

He said perhaps the thing he enjoys most about engineering is seeing a project through from beginning to end and being involved every step of the way.

"I am honored to be able to see a project executed from conception to implementation, in addition to seeing flaws in current systems and how they can be improved," Floyd said.

Although still early into his AEDC career, Floyd already has a project that stands out to him. He said his time working with the test data acquisition system team was "much appreciated and valued" in his career.

"I learned the nuances of project planning and execution along with growing my ability to overcome obstacles to release and sustain a good product," he said. "Despite many challenges, the system is now deployed in VKF Tunnel C with more Flight wind tunnel installations on the schedule. I am proud to have played a part in the project, and I look forward to seeing more milestones achieved as the project progresses."

Will Garner

Will Garner had already plotted his course. He knew he wanted to work as a scientist for the U.S. government.

"I chose to pursue a career in engineering because it would enable me to solve real-world problems, serve my country and have a concentration in the field of science," he said.

Garner's work for AEDC has allowed him to turn his goal into a reality. An Air Force civilian employee, Garner is currently the Propulsion Test Branch Instrumentation, Data and Controls technical lead for the Test Information Systems Section at Arnold AFB. The electronics engineer, who is nearing the end of his fourth year at Arnold, has held his current role for a little more than a year.

"The job takes the needs of future program ID&C requirements and directs a path forward to ensure AEDC's viability as a leading propulsion test facility," Garner said. "Another key function of the job is maintaining current assets in the turbines test cells to make sure they are ready for operation."

Prior to his most recent post, Garner was an ID&C engineer for the Test Operations and Sustainment contractor for AEDC, working primarily in the jet propulsion and turbine test cells within the Propulsion Test Branch and with the Design Solutions group for Engine Test Facility plant controls.

Garner earned his Bachelor of Science in electrical engineering from the University of Tennessee at Chattanooga.

"Being an engineer is having the perspective to identify the true problem, rationalizing potential alternatives to solve the problem and the technical knowledge to implement the determined solution," he said.

Garner said being an engineer at Arnold can be challenging at times, but he described the work as often "interesting" and "groundbreaking." He added his involvement on projects in which the results directly impact the warfighter have given him a "very high sense of dedication" to the AEDC mission.

"Those projects allowed me to find true value in knowing the things I do out here really matter," he said.

Nissa Schuman

Nissa Schuman wanted to follow in her father's footsteps. And she did, aside from taking a slight deviation along the way.

"He was a civil engineer for the government, and I wanted to be an engineer, too," she said. "I just decided I liked things that fly as well, so that tailored the type of engineering classes I took in college."

Schuman, who has been at Arnold since 2010, is currently a test engineer and test manager in the Aerodynamics Test Branch. In this role, she helps test customers plan, schedule and execute tests in the wind tunnels at Arnold.

"Being an engineer at Arnold means you get to see a lot of programs come through here and work on a bit of everything," Schuman said. "We have some unique facilities here on base that make us a frequent stop for programs developing or testing anything that will fly."

Schuman, an Air Force civilian employee, earned her Bachelor of Science in aerospace engineering from the University of Tennessee and her Master of Science in the same field from Purdue University.

Prior to mid-2015, Schuman worked in the Analysis Branch at Arnold as a test analyst supporting the Space Test Branch.

For Schuman, being an engineer means tackling problems and finding solutions as a team. She said, more specifically, this involves working together with others to successfully run multimillion dollar tests at Arnold.

Over the course of her AEDC career, Schuman has worked on plenty of projects that she has found interesting for one reason or another.

"Some tests have shown interesting results in data, while other projects were technically challenging to execute," she said.

Ron Shumpert

A career in an industrial setting and the prospect of getting acclimated to the technologies that lie within could be intimidating for some job seekers.

Not for Ron Shumpert.

It was actually the complexity of the AEDC facilities that drew him to seek a career at Arnold.

"Even from the outside just looking at the facilities and how big they are, you can't imagine all the pieces and parts it takes to make the plant and test cells work together," Shumpert said. "Everything in school was newer technology. Most things here are physics-based with technology mixed in. One of the biggest challenges is figuring out how to make the old and new work together and, when they don't, figuring out why they don't and coming up with a solution."

Shumpert is a test operations engineer at Arnold. He assists in overseeing wind tunnel C in the von Kármán Gas Dynamics Facility and helps in other areas of the VKF plant when needed. Starting out as a mechanical system engineer in the VKF plant, Shumpert has worked for the Test Operations and Sustainment contractor for AEDC since June 2019. He earned his Bachelor of Science in mechanical engineering from the University of South Carolina in December 2018 after working as an aircraft and airframe and power plant, or A&P, mechanic for 15 years.

Shumpert's affinity for hands-on work runs in the family. His grandfather worked on helicopters while serving in the U.S. Marines. His uncle also has experience working as an A&P mechanic. It was while working with his uncle one summer that a then-16-year-old Shumpert decided he too wanted to be an A&P mechanic.

However, observations made during his career as an A&P mechanic played a large role in Shumpert's decision to alter his course and pursue an engineering career.

"As an A&P mechanic, I picked up on issues we would have with various pieces of equipment that could have been resolved in the design process. I wanted to try to improve things earlier on," he said. "Also, to be blunt, I wanted more steady employment. We got furloughed a lot. It wasn't as easy as I thought it would be. I learned that one engineer doesn't design the whole system, just one part. That highlighted for me the importance of teamwork and communication and their vital role in successful designs and implementation."

Shumpert said his engineering career has thus far kept him on his toes, as every day presents its own challenges.

"The craziest things can happen sometimes," he said. "It's not always what you would expect."

In fact, Shumpert said he could only recall one time in which a test went exactly as planned with no challenges to overcome. He described this particular test as "boring."

"There are always different problems which keeps things interesting," he said. "It's only frustrating if you let it be.

Although Shumpert spends a great deal of time in Tunnel C, the most memorable challenge for him during his time at Arnold actually involved some repair work in VKF Tunnel B. He said the occasional change of scenery to provide support where needed comes with the territory for test engineers.

"You go wherever you're needed," he said. "That's the name of the game. We work together and help each other."

Daniel Soderquist

Things often have a way of just working out.

Daniel Soderquist, a computational fluid dynamics analyst at Arnold AFB, first considered a career in engineering not because it sounded fun, but because his father was an engineer and his job provided the family with stability.

"Halfway through high school, I started to learn what engineering actually was, and I realized that I enjoyed it. One day in particular while modeling some geometry in SolidWorks [engineering software] it hit me that I could see myself doing it for the rest of my life. My understanding of what engineering is has evolved since then, but that was the point where I began enjoying engineering."

Soderquist has held the role of CFD analyst for the entirety of his nearly three years at Arnold. In this role, he performs modeling and simulation to support test programs and other research objectives. He utilizes engineering software to build computational models of test articles in their test environment and then runs simulations to provide flow-field visualization and other results, such as lift and drag predictions.

Soderquist added that, to him, engineering means applying math, science and creativity to solve problems.

"Being an engineer at Arnold is a uniquely exciting experience because of the great variety of testing that happens here," he said. "There are structural-, electrical-, chemical- and fluids-related problems that need to be solved every day to keep the test facilities running and to ensure they are world-class. Even though everyone has their specialty, people often end up getting their feet wet in several other areas of engineering."

Soderquist, who works under the Technical Management Advisory Services contractor for AEDC, earned both his bachelor's and master's degrees in mechanical engineering from Brigham Young University.

As for a standout project, Soderquist pointed to a recent effort in which he was involved in the design of a new test article to be used for research and process improvement.

"I ran CFD simulations for several conditions and configurations to help iterate the geometry until it satisfied our requirements," Soderquist said. "Then I got to work closely with the design group as they created drawings and turned the concept into something that could actually be fabricated. It was a rewarding experience for me to be a part of multiple stages of the project and to meet people of various backgrounds."

A Recovery of Airbase Denied By Ordnance (RADBO) vehicle, uses a laser to safely detonate and clear unexploded ordnance. The Air Force Life Cycle Management Center's Agile Combat Support Directorate will field 13 RADBOs by April of 2023. (U.S. Air Force photo)

Air Force to deliver vehicle that uses laser to clear bombs

By Brian Brackens
Air Force Life Cycle Management Center Public Affairs

ROBINS AIR FORCE BASE, Ga. – The Air Force Life Cycle Management Center's Agile Combat Support (ACS) Directorate is on track to deliver by fall of this year, the first of 13 vehicles that utilize directed energy, or lasers to safely detonate and clear unexploded ordnance – such as bombs, grenades, improvised munitions or other explosive devices – on airfields in deployed or austere locations.

Known as the Recovery of Airbase Denied By Ordnance (RADBO), the Mine-Resistant Ambush Protected (MRAP) vehicle uses a three-kilowatt Zeus III laser and a robotic arm. It weighs approximately 18 tons, and seats up to four crewmembers.

"We have an air superiority mission," said Tony Miranda, RADBO program manager with the ACS Directorate's Support Equipment and Vehicles Division, which is leading the effort to acquire and field the RADBO. "If we are in a high threat environment, and there are unexploded ordnance on the airfield, maintainers can't take care of the aircraft and the aircraft can't get off of the runway. These RADBO vehicles will be utilized by Explosive Ordnance Disposal (EOD) technicians to detonate the unexploded ordnance (UXO) from a standoff range, so we can get back to the business of flying planes."

"Instead of having EOD personnel dispose of or render safer at close range, you can neutralize these UXOs from a distance using the RADBO system," added Al Bello, the Mobility & Vehicles Branch Chief. "RADBO is just one piece within the Rapid Airfield Damage Recovery program. When an airfield is attacked, there could be unexploded ordnance, as well as craters. Obviously, there is a need to quickly survey the airfield, identify where the unexploded ordnance is located, and then use RADBO to neutralize any UXOs. Once that is done, heavy equipment can come in and safely repair the damage to get the airfield back up and running to generate sorties for the fight."

According to Miranda, the laser on the vehicle is quick and absolutely effective.

Currently, Air Force experts are conducting ordnance characterization, where they are evaluating and cataloging how different types of ordnance detonate after being shot with the laser.

The robotic arm or interrogator arm on RADBO is another key feature. It will be used to move bombs and investigate craters or areas where an unexploded device may be located, but not visible.

The Support Equipment and Vehicles Division has been instrumental in the development of RADBO, working closely with the Air Force Civil Engineer Center's Explosive Ordnance Disposal Division to define requirements for the vehicle. In 2020, the Support Equipment and Vehicles Division awarded a $40 million contract to Parsons Government Services Inc. to build two prototypes and 13 RADBO systems, and is working to ensure production stays within budget, on schedule, and that performance expectations are met.

The last vehicle under the current contract is expected to be delivered by April of 2023.

TOWN HALL *from page 1*

Jason Austin, chief, Arnold Engineering Development Complex (AEDC) Public Affairs, shows Gen. Arnold W. Bunch Jr., commander, Air Force Materiel Command, a virtual reality tour of AEDC facilities during the general's visit to Arnold Air Force Base, headquarters of AEDC, Jan. 27. The virtual reality tours are being explored as a public affairs tool.

Lt. Col. John McShane, chief, Aerodynamics Test Branch, Test Division, Arnold Engineering Development Complex (AEDC), speaks with Gen. Arnold W. Bunch Jr., commander, Air Force Materiel Command, while showing him around Tunnel B of the von Kármán Gas Dynamics Facility at Arnold Air Force Base, headquarters of AEDC, Jan. 27. *(U.S. Air Force photos by Jill Pickett)*

Gen. Arnold W. Bunch Jr., commander, Air Force Materiel Command, addresses members of the Arnold Engineering Development Complex (AEDC) workforce during a virtual town hall while visiting Arnold Air Force Base, headquarters of AEDC, Jan. 27.

Individuals performing work at Arnold and other Air Force installations are required to attest to their vaccination status. Unvaccinated employees are required to test weekly for COVID-19 and maintain physical distancing from others. Service members, contractors, federal employees and visitors must, regardless of vaccination status, wear a face covering indoors.

"The mandates are there. We are enacting them in accordance with the executive order that came down from the president and the Safer [Federal] Workforce initiatives. We are doing the best we can to work our way through those," said Bunch.

While he said vaccination mandates are creating a degree of stress among the workforce, AFMC will continue to follow the guidance handed down by Headquarters Air Force and the Department of Defense.

"Right now, we're following those guidelines and, right now, I don't intend to change the way that we're implementing those," Bunch said. "Unless I get different direction down, we're going to continue to follow those guidelines. That will require unvaccinated individuals to test on a weekly basis. We will follow those distancing rulesets. All of those things we are going to continue to follow those for the foreseeable future."

The COVID-19 pandemic spurred an increase in telework across the Air Force. AFMC leads the Air Force in telework opportunities for its personnel and its continuing assessment of the work arrangement. Bunch said that he remains committed to telework, hoping to see it grow where appropriate and utilized when applicable.

"The message I want everybody to take is we are not going to go back to what we were doing before," Bunch said. "We should have adopted it in some cases earlier. There are benefits here that we need to reap."

Bunch added he feels capitalizing on telework and offering such opportunities could aid in personnel retention, particularly among the more digitally-savvy junior workforce. He said staff throughout the AFMC has not only demonstrated they can remain productive in a telework-heavy job environment, they have shown they can thrive.

"I have had individuals tell me that their bosses have said, 'If you're not here, you're not working.' I disagree with that," Bunch said. "We awarded more contracts the first year of COVID than we had awarded the year previously. We did not miss contracts. We met all of our milestones. We got the mission done."

Bunch said increasing diversity, equity inclusion and accessibility with the AFMC remains his top priority. The key to this, he said, is creating an environment that eliminates any barriers which prevent personnel from achieving their full potential and those that inhibit retention of diverse staff.

"We're making great strides," Bunch said. "We're leading the rest of the Air Force in this area, but I can't let my foot off the pedal. None of us can. We've got to continue to focus on this. We've got to stress it, and we've got to continue to take steps to create the environment where every Airman has the opportunity to perform to their full potential."

The AFMC commander also touched on the focus shift the U.S. military is expected to make following the approvals of the latest National Defense Strategy and National Military Strategy, both of which are currently being reviewed. Bunch said the nation's defense focus is likely to shift from extremist organizations and counterterrorism to technologically-advanced near-peer adversaries.

The Air Force, Bunch said, is focused on advancing technology to ensure the U.S. maintains a technological advantage over potential adversaries. He added the test enterprise must be part of the Air Force effort to further capabilities in areas such as hypersonic, space and advanced engine technology.

According to Bunch, AEDC will play a key role.

"There's a lot of work that will go on in the test enterprise and a lot of work that will go on within AEDC that's going to contribute to us being able to make those things reality and not just things we talk about as we try to bring that technology to the field in a more timely manner," Bunch said.

One thing that could help deliver technology more quickly is the AFMC Digital Campaign, he said. This coordinated effort aims to move the activities of the enterprise to modern digital capabilities and processes with the goal to deliver capabilities at increased speed and efficiency by designing, sustaining and modernizing them in an integrated digital environment.

He noted through the Digital Campaign, Arnold was able to partner with a program office, collect additional data and complete a test program six months earlier than originally planned.

"That's the kind of power that digital can bring to us, and we want to grow that and utilize that more as we get things done so we don't have to test as many things in the air because testing in the air has a lot more unpredictably there, a lot of factors that you can't control and it's a whole lot more costly," he said. "So we're going to continue to push the digital campaign."

Bunch touched on some other items during the town hall, including efforts to enhance information technology across the AFMC and his desire to see innovations implemented at the base-level scaled across the Air Force.

He concluded by saying it has been an "absolute joy" to work for the 89,000-plus Airman of the AFMC. He encouraged viewers to "keep telling the story" of what they do and showing the value of what they do.

"Let me close with 'thank you' for what you do," Bunch said. "It is an honor to get to work for you. Please keep doing all those great things. Remember, and I still firmly believe this – we're the most important major command in the Air Force. Not because that's arrogance. That's because everything that we do we do for everybody else."

BHM *from page 1*

After a 25-year PA career with the contractor, I had the opportunity to accept a position with the Air Force public affairs office as the chief of operations in 2019. It's a fulfilling position where I've learned the "why" behind the products our PA office produces. After completing the Defense Information School Public Affairs and Communication Strategy Qualification course, I was excited to share what I learned with our contractor PA office. It's important that every PA team member understands the "why" in order to develop an effective communication strategy in meeting the command's goals.

So, what advice would you give to someone who is looking to further their education by going into public affairs? What are the benefits/challenges?

In order to be an effective communicator, you must always look for ways to continue your education or refine your craft throughout your career. The communication field has changed so dramatically since the 90s.

You should remain relevant in new technology. For my generation, the computer as opposed to the word processor or a digital news subscription opposed to the newspaper. Now, we must keep up with ever-changing social media options and trends to communicate with different audiences.

What's a fun fact that your colleagues do not know about you?

Before my career with AEDC, I worked more than two years at The Nashville Network with the "Nashville Now" show hosted by Ralph Emery. "Nashville Now" was a live variety television program featuring interviews and performances by mostly country music artists and occasionally comedians. I was an intern there and was hired after graduation to assist with preparing artist's music copy for the house band, assisting the show writers with Shotgun Red, a puppet, skits and being a gopher for the artists. Don't get too excited, most of the gopher work was mostly with the artists' managers. When there was an opportunity to meet an artist, it's interesting how artists were sometimes nicer than their managers.

Are there any books by African American/Black authors that interest you? Why?

I began reading "Stamped: Racism, Antiracism, and You" by Jason Reynolds and Ibram X. Kendi. It is a history of racism and how we see ourselves in racism.

My next read is "Four Hundred Souls" by Ibram X. Kendi and Keisha N. Blain. This book is a historical perspective of the journey of the African American presented by 90 writers in essays, short stories and polemics.

I'm interested in these books because of the different perspectives provided on African and African American life before and after the U.S. slave trade of 1619. I'm looking to expand my knowledge beyond what I learned during my public education which is very limited in providing information about African American culture and challenges.

Last, but not least, is there an African American/Black person who made History that you admire? Why?

Tiffany, there are so many well-known African Americans who we often admire for their accomplishments, but the ones I admire the most, are closest to me. I look up to my husband, Coleman March Jr., for his optimism and determination in continuing his education and providing for our family. His care extends to others through his ministry as he performs his pastoral duties. I admire him for his love for God. I also admire my parents and my in-laws who have made a great impact on my life with my husband and family. I've been blessed to witness how they have overcome financial and racial obstacles and made successful marriages. We lost my husband's mother in 2020 and my father in 2021. In my eyes, my husband and parents are history makers.

Raquel, the pain and loss of your loved ones can be overwhelming so I appreciate your willingness to discuss your family. It sounds like the key to your success is your family network. I enjoyed learning more about you and your career in Public Affairs.

AEDC quarterly award winners announced

Maj. Scott Burrows
Hypersonic Systems Test Branch,
Arnold AFB
Field Grade Officer of the Quarter

2nd Lt. Aaron Runnells
846th Test Squadron,
Holloman AFB
Company Grade Officer of the Quarter

Tech. Sgt. Ida Rice
846th Test Squadron,
Holloman AFB
Non-Commissioned Officer of the Quarter

Caleb Bell
Aerodynamics Test Branch,
Arnold AFB
Civilian of the Quarter Category II

Matthew "Heath" Bowman
Space Test Branch,
Arnold AFB
Civilian of the Quarter Category III

Lisa Scalia-Maloney
Services,
Arnold AFB
Non-appropriated Fund Civilian of the Quarter Category I

Patricia Henderson
AFTC/PZ Branch,
Arnold AFB
AFTC/PK Civilian of the Quarter Category III

Photos unavailable for the following individual winners:

Samuel Gigioli
Aerodynamics Test Branch,
Arnold AFB
Civilian of the Quarter Category I

Melissa Effingham
Services,
Arnold AFB
Non-appropriated Fund Civilian of the Quarter Category II

Team winners:

Exceptional Innovator Award:
Birdchaser Development and Test Team,
846th Test Squadron,
Holloman AFB

Technical Achievement Award:
AVSF Hydrodynamic RAM Test Team,
704th Test Group,
Wright-Patterson AFB

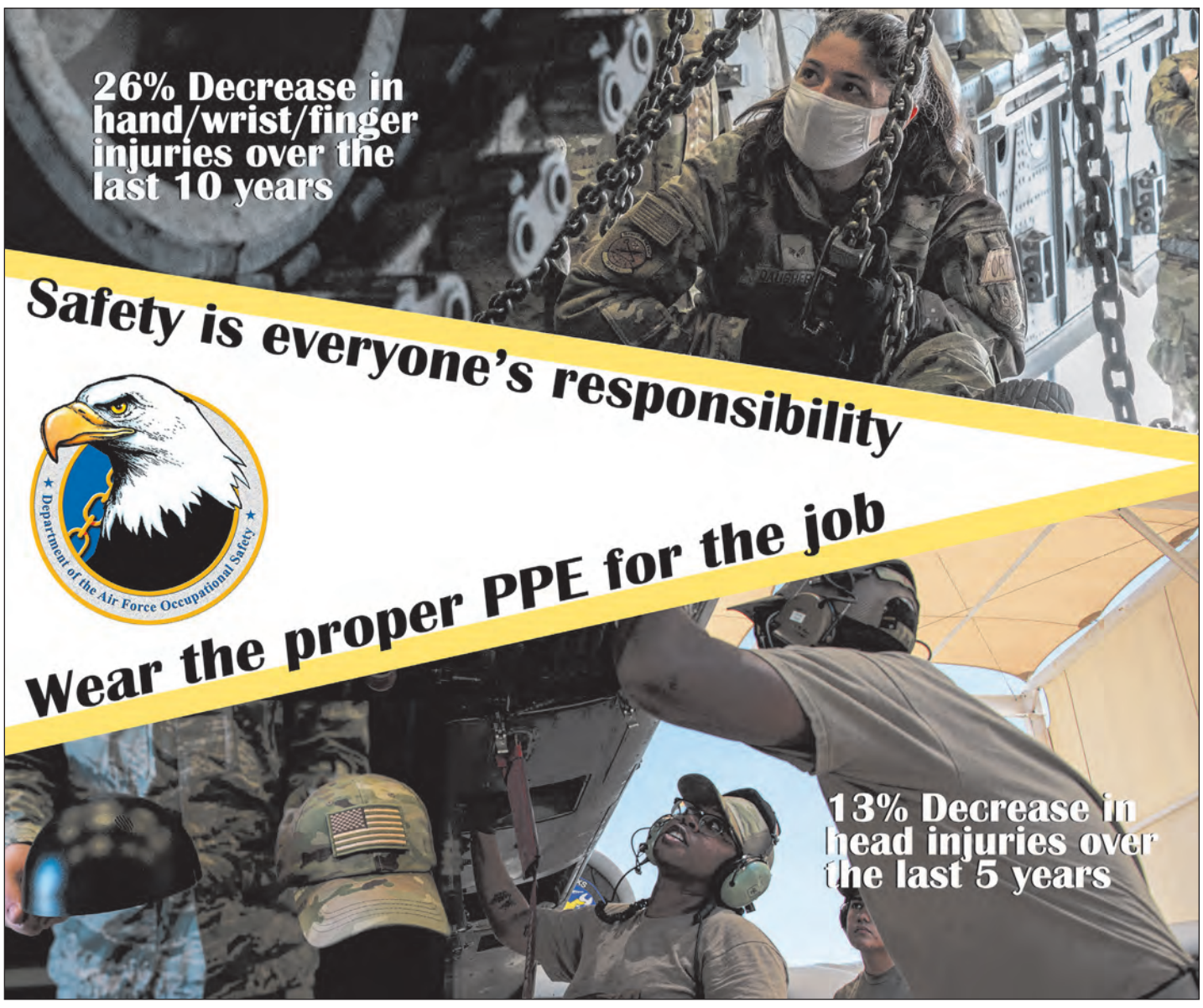
Semi-Annual Gen. Lee Gossick Team Excellence Award:
Fiscal Year 24 Program Objective Memorandum Team XP,
Plans and Programs Division,
Arnold AFB

Anderson promoted to lieutenant colonel

From left, Lt. Col. John McShane, chief, Aerodynamics Test Branch, Test Division, Arnold Engineering Development Complex, administers the oath of office to newly-promoted Lt. Col. Wesly Anderson during a ceremony Jan. 28 at Arnold Air Force Base. ***(U.S. Air Force photo by Jill Pickett)***

Decreasing injuries is the goal

By Lisa Gonzales
Air Force Safety Center



The Department of the Air Force has a well-established and robust safety program in place to safeguard personnel. The programs assist personnel in identifying areas of concern and giving them the opportunity to be proactive in finding and fixing hazards before they occur. This is a multi-front approach working with other agencies and services to expand resources, knowledge and expertise. ***(U.S. Air Force graphic)***

KIRTLAND AIR FORCE BASE, N.M. – What is safety? Safety is the state of being safe or not being dangerous or harmful; freedom from harm or danger or a safe place according to the Merriam-Webster dictionary and the Oxford dictionary gives its definition as the state of being safe and protected from danger or harm.

A safety professional may feel the job is broad and wide, requiring interactions with multiple agencies inside and outside the Air and Space Forces. They include investigating a variety of hazards and mishaps that may lead to or involve injuries and fatalities. On top of all that, mishap prevention calls for trending and analyzing a copious amount of data. Data that spans all plains of the injury field such as injury mechanisms, affected body parts, injury types, activities, different work-shops, installations, job specialties and so much more! Are we alone? No … here are a few great ways some teams at the Air Force Safety Center are tackling these same challenges.

The Department of the Air Force has a well-established and robust safety program in place to safeguard personnel. The programs assist personnel in identifying areas of concern and giving them the opportunity to be proactive in finding and fixing hazards before they occur. This is a multi-front approach working with other agencies and services to expand resources, knowledge and expertise.

The Air Force Safety Center's Epidemiology Branch partnered with the National Institute for Occupational Safety and Health for the past five years to conduct several case studies, one being on finger, wrist and hand injuries and their affected job specialties. The partnership has provided a better understanding of common injuries associated with DAF specialties and explores possible solutions and/or recommendations for future mitigation and prevention.

"To better understand injuries it's important to explore the various facets of injuries such as affected body parts, injury types, affected job specialties and work with civilian and federal partners when possible," said Lt. Col. Heidi Stallings, AFSEC injury epidemiologist. "NIOSH has provided us wonderful expertise and support we otherwise would not have."

In a separate analysis, AFSEC reviewed data from 2017 through 2021 for on-duty mishaps being reported throughout the DAF. Those most notably reported were slips, trips and falls with sprains and strains, lacerations, and head-strikes. The DAF saw a 13% decrease in head-strikes from the five year data pull.

Highlights from NIOSH and DAF efforts are shown below, providing a well-researched summary of safety data.

Finger, Hand and Wrist Injuries – NIOSH's case study consisted of ten years of data, from fiscal year 2008 through 2018, covering injuries affecting fingers, hands, and wrists across aircraft maintenance and back shops such as civil engineering and metal works. These types of injuries accounted for 32% of all on-duty mishaps. The study identified that there were 14,552 noncombat finger/hand/wrist injuries in the United States Air Force during that timeframe.

The preliminary NIOSH study shows a 26% decrease in FHW on-duty injuries. Focus materials and training was distributed through the AFSEC public website, social media and other internal methods for utilization in safety offices and throughout the DAF to minimize and mitigate those injuries.

Slips, Trips and Falls –This focus was on elevated working surfaces to include aircraft and vehicle maintenance across all work areas. Slips, trips and falls account for the third largest type of injury mechanism which in turn caused sprains and strains, and second in line to cause fractures and contusions. Fractures accounted for 44% in lost work days, due to fractures that may require surgery, recuperation or physical therapy with follow up medical visits. When proper risk management is used injuries can be avoided.

According to the Bureau of Labor Statistics in 2020, falls are among the top three leading causes of work-related death annually for workers in the United States. Falls in the workplace are avoidable, by taking extra precautions to find and fix fall hazards and taking the steps it takes to prevent them.

Sprains and Strains – When reviewed across all work areas, sprains and strains accounted for the top injury type for on-duty injuries due to slips, trips and falls in most cases. A general downward trend is noted for on-duty cases; although, a specific analysis is not available for the exact cause of the downward trend.

Head Strikes – The use of head protection, if and when feasible, is recommended in all work areas where head-strikes are possible. By wearing a bump cap or a hard hat, head injuries can be prevented. Aircraft maintenance had the highest number of head and neck injuries, 3.6 times higher when compared to Security Forces. Working on aircraft or the flightline has inherent risks involved; however, when proper risk management and a job hazard analysis is done, it can help alleviate those risks. Wearing the proper protection can help protect your head from lacerations or concussions.

Laceration injuries – The focus on maintenance, logistics and civil engineering showed 122 documented amputations from 2015 through 2021, 80% (97) affected fingers and accounted for over 76% of permanent partial disability cases within amputations overall. Working with a saw accounted for 13% of finger amputations.

The DAF has seen an overall decrease in on-duty mishaps, while a reduction in numbers is good, the goal will always be zero.

"We encourage every Airmen and Guardian to have open discussions on safety issues they see within their work areas," said William Walkowiak, chief of Occupational Safety at the Air Force Safety Center. "Empowering Airmen and Guardians to get involved in their shops to minimize or mitigate hazards before an injury occurs will help continue the downward trend."

No matter the workplace, the responsibility of mishap prevention and safe operations falls to every member of the Air and Space Forces to take the extra look around the work area to identify hazards and implement the controls necessary to minimize or mitigate them.

For additional information about occupational safety mishap prevention programs visit the Air Force Safety Center website at ***https://www.safety.af.mil/Divisions/Occupational-Safety-Division/***.

Legion Pod reaches IOC

By Staff Sgt. Cassandra Johnson
Air Combat Command Public Affairs

A U.S. Air Force F-15C Eagle taxis for takeoff at Kadena Air Base, Japan, Jan. 26. F-15 pilots employ Agile Combat Employment, an operating concept that leverages interoperability between joint forces to maintain the strategic initiative and present lethal, credible combat power. ***(U.S. Air Force photo by Staff Sgt. Benjamin Raughton)***

JOINT BASE LANGLEY-EUSTIS, Va. (AFNS) – The Air Force reached initial operating capability on its latest infrared search and track pod integrated on the F-15C Eagle, Jan. 21.

The IRST pod, known as the Legion Pod, is a sensor that uses the infrared spectrum to help pilots to track and engage enemy aircraft in environments, where traditional radar technology is denied. The pod also provides a way of monitoring enemy aircraft from extended ranges that normally go undetected, boosting the effectiveness of the F-15C and its ability to dominate the battlespace.

"In today's warfighting environment, not only do we have the capability and technology to jam and counter radar, but our enemies do too," said Maj. Daniel Hermanski, Air Combat Command's F-15 requirements branch chief. "This pod is the next step for countering jamming technology and allowing our warfighters to fight and track the enemy in contested environments."

According to Lockheed Martin, the Legion Pod can accommodate additional sensors within its structure, making the task of integrating new capabilities possible with minimal aircraft modifications. The versatility and adaptability of the pod design provides for integration on other fighter aircraft such as the F-16 Fighting Falcon and F-15EX.

"It's a game-changer," said Todd Mathes, ACC's F-15C program element monitor. "The capabilities this pod provides are critical to the way we provide combat power and keeps us at the leading edge of the fight."

As the lead major command for all fighters, ACC is responsible for equipping the fighter force regardless of whether they own the unit operationally. Reaching IOC on this pod is an example of ACC's continued collaboration with fighter units across the Air Force and the test and evaluation squadrons at Eglin Air Force Base, Florida, and Nellis AFB, Nevada.

"We work closely with our Air Force and industry partners to identify and eliminate gaps in our capabilities, which our enemies would attempt to exploit," Mathes said. "This allows us to field and test new technologies to determine the best fit to give us an edge in battlefield decision making."

The Legion Pod is projected to reach full operational capability later this year as the remaining contracted pods are delivered to tactical F-15C squadrons.

BRAVO 0 hackathon proves Air Force can develop weapons capabilities in under one week

By Secretary of the Air Force Public Affairs

NELLIS AIR FORCE BASE, Nev. (AFNS) – On Jan. 11, the Air Force concluded the first department-wide, secret classification innovation hackathon at Nellis Air Force Base inside the Threat Training Center's hangar following six days of 24-hour operations.

Working beneath the wings of MiG jets strewn with duct-taped network and power cables, over 80 hackers – product managers, engineers, pilots, and data and visualization scientists – of experience ranging from E-3 to general officer and with contributions from 12 industry partners – developed capabilities leveraging Air Force weapons, sensor, health and maintenance data. These new capabilities were demonstrated during a science fair-style exhibition.

The approximately 200 hackers, support staff, attendees and judges came from Air Force software engineering groups, software factories, and flight and frontline units. The group included 15 general officer-level attendees and judges including the Air Force's vice chief of staff, chief data officer, chief experience officer, chief science officer, and additional senior members from Air Combat Command.

Stuart Wagner, the Department of the Air Force's chief digital transformation officer, set the original vision for the event.

"Universities and technology companies have sponsored hackathons for decades where attendees rapidly develop products leveraging data and technology infrastructure," Wagner said. "We believed a classified-level hackathon could develop emergent weapons system capabilities at unprecedented speed and consequence and at lower cost. Senior leaders have validated this hypothesis."

The event's 11 teams focused on challenges such as: jet sensor visualization and playback, target planning and pairing, multi-jet sensor fusion analysis, artificial intelligence-assisted radar sensor failure mitigation, maintenance visualization and automation/artificial intelligence-assisted personnel recovery.

"DOD has prioritized security to such an extreme that it has hindered our ability to adapt weapons systems to emerging threats. Adversaries regularly release unseen capabilities demanding agility," Wagner said. "If we build and refine capabilities and tactics in an integrated manner against daily collected telemetry data, we can deploy these updates improving our ability to react and deter new red capabilities. By taking a risk-on approach to need to know, software availability and data accessibility with appropriate controls, BRAVO hackathons will change how we enact warfare."

Teams brought in open-source software, built their own virtual machine images and added live data such as new automatic dependent surveillance-broadcast recordings.

The BRAVO hackathon's "maiden voyage" included support from Air Force CyberWorx, Chief Information Office, Chief Data Office, ACC (Operations, 350th Spectrum Warfare Wing, Chief Scientist Officer, 59th Test and Evaluation Squadron, Shoc-N), 16th Air Force, Morpheus, AFWERX, TRON, Joint Artificial Intelligence Center, and others.

The event included industry involved through the Air Force CyberWorx Partnership Intermediary, which selected 12 industry partners from a pool of about 60 applicants.

Lt. Col. Judson Dressler, CyberWorx director, noted, "Industry partners played a critical role at BRAVO, and CyberWorx will be considering more ways to break down barriers between industry and government."

This year, BRAVO expects to scale up to exercises involving more than 500 inter-service, inter-agency, foreign partner, and industry hackers.

While hackathon events are sometimes mistakenly identified as solely security-focused, the Air Force plans to use these events to creatively improvise or "hack" solutions to unsolved problems or limitations.

Outputs from these events range from an immediate capability for operational integrators to idea prototypes that support questions asked from program offices, requirements officers, or strategic offices. Led by Jimmy Jones, the STITCHES Warfighter Application Team, which hosted the information system for the event, is leading post-hackathon operationalization.

To allow hackers to quickly develop software and AI capabilities, BRAVO utilized the Joint AI Center's Joint Common Foundation platform led by Capt. T.J. Wiley, AI Infrastructure and Platforms chief at the Joint Artificial Intelligence Center.

"Through our partnership with the Air Force, we delivered our newest enterprise-level AI DevSecOps capability to the event while obtaining important feedback from a diverse group of data scientists and developers solving real-world problems," Wiley said.

Named BRAVO in the spirit of Project B, attendees wore shirts emblazoned with messages such as: "Build >> Talk," "Be Disagreeable," and "#3." The event provided a new level of creative freedom to hackers who pitched ideas, formed teams, and even selected their working hours.

The BRAVO hackathon series is named from Project B, a 1921 series of joint Army-Navy target exercises conducted on surplus ships in response to Army Brig. Gen. Billy Mitchell's claim that bombers sink battleships. This claim undermined the then-current investments and strategy of the then Department of War. SECWAR and SECNAV authorized Project B to disprove and disgrace Mitchell by demonstrating the insignificance of airpower. Mitchell instead directed his bombers to destroy all the test ships, changing military strategy, defense resourcing for aeronautics and aircraft carriers, and ultimately the Department of War by proving the need for a separate Air Force military department.

Styled off Project B, BRAVO hackathons are sponsored by senior Department of Defense leaders to provide technical and cultural innovation environments that enable government and industry to test and validate bold ideas on real Department of Defense data.