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DEOR MAN



DIRECTOR'S SAFETY CORNER

Risk Leadership Drives Mission Success

The Glenn senior leaders recently engaged in a panel discussion with NASA's Chief Engineer Ralph Roe; Chief of Safety and Mission Assurance Terry Wilcutt; and me to look back at some of the examples where risk leadership was demonstrated at the highest level of our agency to ensure mission success. As we move forward with lunar and Mars exploration, we will increasingly rely on our rigor to deliver, our ability to foster a culture of open discussions, and our appreciation for risk disposition and acceptance. It is such an exciting time and although we have challenges, 1 appreciate how the Glenn team continues to step up, along with the technical authorities, to address the risks and seek sound solutions.



AeroSpace Frontiers

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Submit short articles and calendar items to the editor at doreen.b.zudell@nasa.gov.

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One Small Step..

America Celebrates First Steps on the Moon

People of all ages gathered across the nation to celebrate Apollo 11 and Neil Armstrong and Buzz Aldrin's momentous steps on another world. Glenn staff, led by the Office of Communications and External Relations (OCER), interacted with thousands of people the third weekend of July.



Dr. Antoine Moss talks with a Voice of America reporter about the festival.

Apollo 50 Festival on the National Mall in Washington D.C.

The Smithsonian National Air and Space Museum and NASA hosted the Apollo 50 Festival on the National Mall in Washington D.C., July 18 to 20. The event featured 20 tented displays with hands-on exhibits and activities. NASA scientists, engineers, leaders and astronauts served on panels and participated in presentations aimed at looking back and forging ahead. Glenn and other NASA personnel staffed the Journey to Tomorrow (JTT) interactive trailer exhibit. More than 5,000 people checked out the JTT exploration-themed interactive kiosks.

.. A Giant Legacy



2019 Summer Moon Festival in Wapakoneta, Ohio

Glenn staff traveled to Wapakoneta, Ohio, hometown of Neil Armstrong, to celebrate the anniversary and share information on the Artemis Program. The 2019 Summer Moon Festival offered activities at the Armstrong Air and Space Museum. More than 14,000 people attended the festival.

Below left: On July 19, NASA TV broadcast live from NASA's Kennedy Space Center in Florida, with stops at key locations around the country. A team from Glenn's OCER and Logistics and Technical Information Division hosted two live look-ins and interviews from Wapakoneta. Interviews included two astronauts and Glenn's Michael Barrett, pictured. (Photos by Marvin Smith)

Below right: The Outreach Team supplied space-themed exhibits, displays and interactive activities. Digital Communications Team members promoted social media platforms and offered an Apollo/Artemis quiz. Office of Education staff conducted hands-on STEM-related activities.



Apollo 11 Navy frogman Mike Malloy, left, appeared with astronauts, Sunita Williams, Michael Good, Gregory H. Johnson, Donald Thomas and Robert Springer. Good and Williams participated in the "5K to 10K Run to the Moon" with 2,000 other runners.

the Summer Moon Festival in

Wapakoneta.





Apollo 50—Next Giant Leap

On July 18 and 19, Glenn joined the Great Lakes Science Center (GLSC) in celebrating "Apollo 50— Next Giant Leap." People of all ages stopped by Glenn's Graphics & Visualization (GVIS) Lab and Space Communications and Navigation (SCaN) exhibits, while an OCER team offered space-themed make-and-take activities. Guests explored the many galleries of Apollo artifacts and interactive exhibits at the NASA Glenn Visitor Center. Astronaut Douglas H. Wheelock made a guest appearance on July 19.

At right:

"We viewed the Apollo 11 landing on a black and white TV. We're here to celebrate the anniversary and going back to the Moon."

-Tim and Cathy Knipp



"What does Apollo's 50th anniversary mean to you and future missions to the Moon?"

Generations of people reflected on that question when they gathered for the Apollo Moon landing celebration.

"We're excited about the first woman on the Moon!"

-Reagan Mendham, 10, and Robin Oden, 8 "I can't get enough of space travel and technology!"

-Dalton Green, 15

"We watched all the Apollo documentaries and learned a lot about the missions."

—Ed Horowitz and daughter, Amira, 12

Security Day 2019: "Are You Safety Smart?"

NASA Glenn's Office of Protective Services (OPS) hosted an informative lineup of speakers who addressed domestic terrorism, workplace violence and human trafficking during their annual NASA Glenn Security Day, Aug. 6.



Left to right: Smith, Gordon, Taylor and Tomaro. (Photos by Quentin Schwinn)

Center Operations Director Robyn Gordon and OPS Chief Christi Tomaro welcomed participants. Two members of the Federal Bureau of Investigation (FBI) began the session by explaining how they work to protect local residents and infrastructure.

FBI Special Agent in Charge Eric Smith of the Cleveland Field Office, highlighted the importance of following processes and engaging partnerships in his investigations. Special Agent Ryan Taylor of the Cleveland Division Joint Terrorism Task Force explained the different types of violent offenders and categories of threat. Both stressed one of the FBI's biggest challenges: predicting the next great threat or action.

"We have to look beyond the day-to-day activities to see what's coming," Smith said.

Retired fire chief and current chairman of the National Safety Council and Public Sector Division David Daniels explained how violent acts in the workplace are often the result of incivility toward one another. He diagramed how lack of respect for one another in the workplace can follow a path of hazing, bullying, mobbing and harassment-eventually leading to violence.

"Different does not mean deficient," Daniels said. "Our workplace culture needs to be more open."







Tomaro, right, recognizes Edmonds for partnering with OPS.

Tomaro recognized four individuals for their partnership in supporting NASA's mission by assisting the OPS. They include: Glenn's Patrick Edmonds, for his proactive approach in ensuring security requirements are met during construction projects: Southwest General's Jackie Haumschild, for her longtime support to NASA's emergency medical first responder program; Erie County Sheriff's Office Sheriff Paul Sigsworth, for his outstanding support to the safety of Plum Brook Station; and Glenn Security Officer Jack Plunkett, for his situational awareness during a security incident at Plum Brook Station in March.

Before and after the break, participants had the opportunity to visit safety-related vendor booths. Breakout sessions for Glenn employees focused on the topics of homeland security and human trafficking. Other presentations were tailored for emergency medical personnel and law enforcement.

By Doreen B. Zudell

Chief Scientist Looks Back, Ahead to Moon

Why go back to the Moon? NASA Chief Scientist Dr. James Green, pictured, championed that question during his town hall presentation "The Future of Lunar Exploration" at Lewis Field on Aug. 12. Green stressed the importance of the scientific precursors, or missions, to the Moon, and lunar samples returned during the Apollo Program. He said these samples dramatically changed our understanding of the origin and history of our Moon, Earth and solar system. Green talked about the Artemis Program, which meets Space Policy Directive 1 and puts humans back on the lunar surface by 2024. Artemis missions will take us to a new region on the Moon, where we will continue to unlock its secrets and establish a sustainable human presence.



GRC-2019-C-06627

Photo by Rami Daud

NEWS AND EVENTS



GRC-2019-C-05007

Photos by Bridget Caswell



GRC-2019-C-05212



Our Children Explore

along with the Cleveland Museum of Natural History and the Great Lakes Science Center, developed a stimulating Take Our Children to Work Day program for employees and their children, July 17. With the help of employees across the center, the event included presentations, hands-on activities and facility tours. Children learned about the 50th anniversary of the Apollo Program, the new Artemis Program, how NASA uses energy to explore the solar system and beyond, plans for humans return to the Moon, and the scientific method of manipulating the properties of air.

Top left: Glenn's Jason Hanna provides information on the Zero Gravity Drop Tower.

Left: Lee Gambol, Cleveland Museum of Natural History, presents "Amazing Air."

100-Year Relay Celebrates 50th Run

On July 31, a group of Glenn employees, interns, retirees, family and friends helped preserve a tradition, while also celebrating the Apollo 50th anniversary. Seventeen teams (including 10 rookie teams) and 68 runners, ranging from ages 18 to 72, participated in the 50th running of the 100-Year Relay at the Lewis Field picnic grounds/running track. A picnic and awards ceremony followed.

According to race coordinator Paul Ferkul, the first relay took place at Lewis Field in June 1978. Four-person relay teams race to complete the 5-mile total distance. Each person has to run at least a mile, but a maximum of 2, with team captains assigning distances to yield the best strategy. Start times for each team were based on a formula to compensate for age and gender differences. There was no age limit nor penalty for experience.

The "Red Shifted" team, captained by retiree Ron Koenig, won the overall Net Time Award and shaved over a minute off their previous race to earn the Most Improved Award, as well. The Actual Time Award went to team "BlaZIN Saddles" captained by Blake Reinke (ZIN). Retiree Bill Foster and his family team "We Are Groot" earned the Family Award.



Glenn's Greg Fedor, right, handled team check-in and coordinated the relay timers to accurately tabulate the final results. (Photos by S. Jenise Veris)



Bill Foster, "We Are Groot" team, takes the baton from his daughter.

Event Encourages Careers in STEM



GRC-2019-C-04805

Photo by Marvin Smith

Kristin Spear, Radioscope Power Systems Program Office, right, and Girls in STEM participants observe a thermodynamic "Stirling" cycle. The instrument aids Spear in explaining how NASA could use Stirling engines with radioisotope power to provide electricity for a spacecraft. More than 200 sixth through eighth grade girls from local community and youth-serving organizations participated in hands-on experiences and career exploration stations during the July 16 event. The day also included speakers, facility tours and a career discussion with panelists Emily Belovich, Dionne Hernandez-Lugo, Rochelle May and Sara Miller. Glenn's Office of Education, with support from employees across the center, sponsored the annual event.













Employees, Retirees Gather for Center Picnic

The Lewis Field Picnic Grounds came alive with music by the Glenn Band, picnic fare, popcorn, games, raffles and a car and motorcycle show during the 2019 Center Picnic on Aug. 7. This year's theme "Celebrating US: 50 Years of Apollo" served as a backdrop for employees, retirees and summer staff to celebrate!





Activities Help Glenn Interns Elevate Skills

As NASA focuses on making exciting advancements to return humans to the Moon and on to Mars, preparing a workforce that is "ready to go" is equally important to achieving mission success. Glenn's Office of Education (OE) introduced several training and development activities to help elevate the skills of 150 summer interns.

One of these activities centered on a design challenge that encouraged teamwork and problem-solving skills. The challenge "Navigating Glenn Research Center" posed the problem: Parking is limited at Glenn. Their mission was to devise a solution, within a 12-hour deadline, that could help employees find the nearest parking space to their workplace. A variety of center resources, including Glenn Research Center Safety Manuals (Chapter 19) and 2 hours of counseling from center staff in the Office of the Chief Information Officer and the Facilities, Test and Manufacturing and Safety and Mission Assurance directorates, were offered. Two teams, The Landing Zone and the Parking Postulators, presented the required conceptual design to earn a tie for overall feasibility. "The skill set of these interns was incredibly impressive," said OE Senior Project Coordinator Eric Hayes. "They were well-rounded, independent thinkers who didn't need a lot of motivation to get their wheels turning."

Additionally, GlennTalks Live presentations put the spotlight on the interns who could best demonstrate confidence and ability to communicate the background and significance of their summer project and its relevance to NASA's mission. Meghan Bush, Benjamin Kott, Valerie Muldoon, Courtney Schiebout and Theresa Smith survived the rigorous review process of their 3-minute videoed presentations to become the Top 5 finalists. All were given an additional 5 minutes to present their projects to the entire intern group and a panel of NASA professionals.

Bush, an Engineering Physics major at Tulane University interning in the Photovoltaic and Electrochemical Systems Branch, emerged as the winner. She thanked Glenn mentors Jeremiah McNatt and Anna Maria Pal for their guidance in her study and presentation of "Characterizing Photovoltaics in a Near-Space Environment." Bush confidently explained how an ER–2 pod could be a faster/cheaper method for characterizing solar cells in a near-space, air mass zero environment. The ER–2 was an old spy plane since retrofitted to serve as a high-altitude research lab.

The third event centered on a Social Media Scavenger Hunt that encouraged interns to explore their environment and share their findings with the public. "Approximately 25 interns participated, exploring and performing a list of feats, which took them to sites inside and outside the gates," explained Glenn Internship Project Manager Vanessa Webbs. "Frederick Brooks, a rising junior Electrical/Electronics/Communications Engineering major at Lawson State University, really embraced the challenge and was the clear winner."



Bush is congratulated by Larry Sivic, Associate Center Director and head judge for GlennTalks Live. (Photos by Marvin Smith; GRC-2019-C-06020)



Finalists for GlennTalks Live included, left to right: Kott, Muldoon, Schiebout and Smith. (GRC-2019-C-06018)



Brooks strikes a pose with a NASA meatball logo smaller than his head. (Photo by Frederick Brooks; GRC-2019-CN-00022)

AWARDS

Dr. Evan J. Pineda was among 18 NASA researchers that received the Presidential Early Career Award for Scientists and Engineers (PECASE) during a recent White House ceremony. This is the highest honor given by the U.S. government to recognize scientists and engineers. Pineda is an aerospace research engineer in Glenn's Materials and Structures Division, recognized for his research to advance a state-of-the-art multiscale failure analysis code.



GRC-2019-CN-00017 Dr. Pineda, left, accepts PECASE award presented by Kelvin Droegemeier, White House Office of Science and Technology Policy director.

RETIREMENTS

Zenaida Roman, Financial Services Branch, Accounting and Financial Analysis Division, retired July 31, 2019, with 33 1/2 years of service.

Peter Sockol, Engine Combustion Branch, Propulsion Division, retired July 2, 2019, with 57 years of federal service, including 55 years with NASA.

IN APPRECIATION

I would like to thank everyone who attended my retirement party or sent messages. I cherish the memories of the good times and many friends I have made during my career, and I will miss you.

Bernice Beznoska

MORE THAN A MEMORY

Jackson Aided Employee Health and Safety

Darlene Y. Davis-Jackson, 55, a safety and occupational health specialist serving in the Occupational Health Branch of the Safety and Mission Assurance Directorate (SMAD), died July 14.

Following two student internships, Jackson's



Jackson

effervescent personality and attention to detail earned her a place in the Human Resources Division in 1983, where she remained for the majority of her 36-year career. While there, she worked tirelessly on a team that developed the center's new employees orientation program for a smoother transition. She also earned performance, time off and NASA Group Achievement awards.

Jackson transitioned to what is now SMAD in 2006, where she conducted ergonomic evaluations and staffed displays on health/safety information to encourage employee interest and responsibility. According to co-workers, serving in the areas of safety and human resources appealed to her "innate spirit of helping others and showing genuine concern."

"Darlene brightened everyone's day with her smile. She was admired and highly respected by her co-workers," said Angela Windau, Occupational Health Branch chief. "Her presence will be sorely missed."



Armstead



Dr. Blue

Betty Jo (Moore) Armstead, 88, a 1982 retiree with 28 years of NACA/NASA service and an additional 15 as a contractor, died June 8. Moore was one of NASA's pioneering female computer analysts/programmers who aided groundbreaking work in computing and technology used to problem solve. She developed a computer program that calculated possible trajectories to the Moon, and designed and wrote a set of routines called the FORTRAN error package.



Dr. James W. Blue, 96, who retired in the 1980s with 25 years of service, died April 24. Blue was a U.S. Army veteran of World War II, who joined the NASA workforce as a Purdue graduate to become a nuclear physicist. He ran NASA's Cyclotron Facility for 25 years. This included research, in collaboration with the Cleveland Clinic, on a Fast Neutron Therapy program for cancer patients.

Jerry M. Winter, 88, a 1993 retiree with 31 years of service, died April 8. Winter was a U.S. Air Force veteran of the Korean War, who joined NASA Lewis as an aerospace engineer in 1962. His work initially focused on improving nozzle ablative throat inserts for storable propellant rocket engines. He later worked on Stirling automotive engines; but by the 1980s, he refocused his efforts to a variety of space power systems, including the Stirling SP-100 nuclear reactor.

Upcoming Center Events

National Cybersecurity Awareness Month



Cybersecurity Day



Wednesday, Oct. 9 MIC Auditorium 9 a.m. to Noon

Keynote Speaker: Kim Komando, National Radio and TV Host

The Kim Komando Show airs on over 400 radio stations throughout the USA and internationally in 177 different countries on American Forces Radio. Her TV show airs on cable and satellite on the Bloomberg TV Network. Kim is also a USA Today columnist, FoxNews columnist and successful Web entrepreneur. And yes, "Komando" is really her last name.



Registration opens Sept. 18 Visit https://events.grc.nasa.gov/CSAME to register.

Attend the event and receive credit for fiscal year 2020 Cybersecurity and Sensitive Unclassified Information Awareness Annual Training.



GSEL MOBILE LIBRARIAN

The Glenn Science and Engineering Library (GSEL) Mobile Librarian will be visiting building 3 through Sept. 19. A Glenn reference librarian will be ready to assist employees with subject searches, finding specific books and articles and other information needs on the spot.

POC: Robin Pertz, 3-5776

OUTDOOR SIREN TESTING

The Emergency Management Office staff will conduct a mass notification "voice" test at building 39 at Lewis Field on Wednesday, Oct. 2. An audible siren test will be conducted on the "severe thunderstorm" tone on Saturday, Oct. 5.

POC: Allen Turner, 3-6826

IFPTE LOCAL 28, LESA MEETING

LESA will hold its next membership meeting, Wednesday, Oct. 9, noon, in the Glenn Employee Center's Small Dining Room.

SUSTAINABILITY STREET FAIR



Thursday, Sept. 26 10:30 a.m. to 1:30 p.m.

Stay tuned to Today@Glenn for details.

Deadline for next calendar section is **Sept. 18, noon**. News and feature stories require additional time. National Aeronautics and Space Administration

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Read AeroSpace Frontiers online at http://www.nasa.gov/centers/glenn/news/AF/index.html.

Dr. Shin Thanks Staff for Support and Friendship

Dr. Jaiwon Shin—who retired as NASA's Associate Administrator for the Aeronautics Research Directorate (ARMD) on Aug. 30—is more than a nationally respected leader and visionary in the field of aviation. Shin is Glenn's hometown hero who has never forgotten his roots.

Born in Seoul, South Korea, Shin came to NASA Glenn (then Lewis) fresh out of Virginia Polytechnic Institute in 1989. He dedicated 15 years to the center, where he became an expert in aircraft icing. In 2004, he left Glenn as chief of the Aeronautics Projects Office to serve as deputy associate administrator and then on to associate administrator for the ARMD at Headquarters. He served there for 15 years.

On July 24, Shin addressed Glenn employees during a town hall and retirement celebration at Lewis Field. Deputy Director Dr. Marla Pérez-Davis and Aeronautics Director Dr. Rubén Del Rosario kicked off the town hall. They acknowledged Shin's contributions to the center and the entire agency, and pledged Glenn's commitment to continue delivering on Shin's vision for aeronautics.

Employees and retirees were invited to share their thoughts as well, thanking Shin for not only his visionary skills but also his caring nature.



Shin, left, accepts the framed seal of NASA Glenn and sincere thanks from Deputy Director Dr. Pérez-Davis. (Photo by Marvin Smith; GRC-2019-C-05994)

"This is a bittersweet time for me," Del Rosario said. "Years ago, Jai took a chance and hired me. I've had the honor of working with him and for him for many years."

During an informal reception and comments at the podium, Shin reminisced about his years at Glenn, and thanked Glenn staff for their friendship and support.

"When I came here from Georgia Tech, that's all I knew. You became my family," Shin said. "What I learned working here [Glenn] has served me well. When I went to Headquarters, you did everything and anything I asked you to do—embracing the directives and strategies and rising to the occasion."

By Doreen B. Zudell

Emergency and Inclement Weather Lines

Lewis Field: 216–433–9328 (WEAT) Plum Brook Station: 419–621–3333

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