



NASA Names Dr. Marla Pérez-Davis as Glenn’s New Deputy Director



GRC-2016-C-04086 Photo by Bridget Caswell

Left to right: Dr. Pérez-Davis, Dr. Kavandi, center, and Associate Director Janet Watkins lead the NASA Glenn management team.

Center Director Dr. Janet Kavandi appointed Dr. Marla E. Pérez-Davis as NASA Glenn’s deputy director, June 6. A 33-year NASA veteran, Pérez-Davis

most recently served as Glenn’s Deputy Director of Research and Engineering. She succeeds Kavandi, who was named center director in March.

“Marla’s demonstrated leadership in managing all phases of Glenn’s research and engineering activities, combined with her experience in the areas of aeronautics, business management and safety assurance, makes her ideally suited to meet the demands required of the deputy director,” said Kavandi.

Pérez-Davis assumed duties as deputy director immediately. She will share with the center director responsibility for planning, organizing and managing the agency-level programs and projects assigned to the center.

Glenn Ignites Largest Fire Experiment



Photo courtesy of ESA/NASA

The Orbital ATK Cygnus cargo craft is released from the ISS, June 14.

Engineers at Glenn and Orbital ATK in Dulles, Virginia, successfully conducted the first remote Spacecraft Fire Experiment, or Saffire I, carried inside an Orbital ATK Cygnus cargo vehicle that departed the International Space Station, June 14.

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Glenn Open Houses Attract Thousands



GRC-2016-C-03377

Photo by Rami Daud

Visitors line up at Cleveland’s I-X Center (pictured) to board buses bound for Lewis Field’s Open House.

Likewise, visitors converged on Kalarahi Convention Center to board buses for Plum Brook Station’s Open House.

The two open houses drew thousands of visitors. See pictorial highlights on pages 4-5.

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There's No Summer Break From Safety

Summer means vacations, outdoor activities and sun! The warm months and long days are perfect for ball games, barbecues, time at the pool and road trips. But don't let the sunny days and warm nights distract you from being safe. Summer can hold significant health and safety hazards. Remember to use sunscreen and bug spray, stay hydrated, and remain alert to road hazards. As you take your leave this summer, make the downtime enjoyable by putting safety at the top of your itinerary.

Take precautions to make sure your summer is as safe as it is fun.

—Janet

Saffire

Continued from page 1

The experiment's purpose is to learn how a fire might behave in a spacecraft after leaving Earth's atmosphere. Understanding how fire spreads in a microgravity environment is critical to the safety of astronauts who live and work in space as NASA prepares for long-duration missions on the journey to Mars. For more details, visit <http://go.nasa.gov/28Zjgfz>.



Glenn-Mentored Team Takes Robotics Championship!

Team 120/Cleveland's Youth Technology Academy (YTA) Dragons "fired up" the offense to become the first Ohio team to win the national *FIRST*® (For Inspiration and Recognition of Science and Technology) Robotics Championship, held in St. Louis, Missouri, April 27-30.

The Glenn-sponsored Team 120 was part of a 3-team alliance comprised of NASA's Jet Propulsion Laboratory's Beach-Bots and Tremont Illinois' Roboteers. Together they clinched the competition, which included nearly 20,000 youth participants from 39 countries.

Team 120—comprised of more than 24 students attending the YTA from 7 Cleveland high schools (MC2 STEM, East Tech, John Adams, John Marshall, Design Lab Early College, New Tech West and John Hay)—is Glenn's house team. The team has been funded and mentored by a group of NASA professionals since its inception in 1994. Glenn

engineer Larry Oberle, Diagnostics and Electromagnetics Branch, has been with the team for 19 years, including 18 years as the lead mentor.

"I'm in awe of how far these kids have come in their understanding of physics and engineering," Oberle said. "Just as important, they've learned to work with their peers from all over the country to produce a winning alliance."

Following the January kickoff, Oberle and George Bilokonsky, YTA executive director at Cuyahoga Community College, spent the next six weeks working with the students. They oversaw design and build of the remote-controlled robot to compete in the game's medieval castle theme, *FIRST STRONGHOLD*™.

Now in its 25th year, *FIRST*® introduces high school students to careers in science, technology and engineering. In recognition of NASA's long-standing



Photo by YTA

Administrator Bolden joined personnel from Glenn, and other NASA centers, who provided mechanical and technical support to the FIRST teams.

support of the *FIRST*® program, NASA Administrator Charles Bolden accepted the 2016 Founders Award. This prestigious award recognizes exceptional efforts to engage students in STEM fields.

"This completes one of the most successful seasons in Team 120 history, along with winning the Chairman's Award in 1999 and induction into the *FIRST*® Hall of Fame in 2003. And we were able to celebrate the win with our Administrator!" Oberle proudly added.

By S. Jenise Veris

Center Picnic: Save The Date!

Please join us, Wednesday, Aug. 10, for the 2016 Center Picnic as we celebrate our employees and retirees, and reconnect with co-workers. The festivities, including lunch, will be from 11 a.m. to 2 p.m. at the Lewis Field Picnic Grounds. In order to receive a lunch, you must register at <http://events.grc.nasa.gov/CenterPicnic>, beginning on Monday, July 18.

Further details to follow on *Today@Glenn*. POC is Betsy Lavelle, 216-433-3198.

Celebrating a 75-Year Legacy

This is the sixth in a monthly series of historical highlights commemorating Glenn's 75th anniversary and extraordinary technical accomplishments that reach across seven decades.



Looking Back: 1990s

During the 1990s, NASA Lewis became the undisputed leader of U.S. microgravity research. Researchers from around the world came to the center to utilize its 2.2 Second Drop Tower and Zero Gravity Facility, a new Space Experiments Laboratory and a DC-9 aircraft to expand in-flight microgravity testing.

Lewis initiated its microgravity efforts in the early 1960s to investigate the behavior of liquid hydrogen in space conditions. The program broadened in the late 1960s and 1970s to include an array of fluids and combustion research for both space and terrestrial applications. With the start of space shuttle flights in the 1980s, microgravity researchers began conducting studies over extended periods of time. The center acquired a Learjet to conduct low-gravity flights to assess experiments for future space shuttle missions.

In the 1990s, Lewis became NASA's lead center for microgravity research in fluids and combustion and formed

the National Center for Microgravity Research in partnership with Case Western Reserve University and Universities Space Research Association. The Lewis Space Experiments Division began contributing a steady stream of experiments that flew during the space shuttle era, culminating in over 200 investigations. The program attracted a large contingent of internationally recognized scientists who made important discoveries regarding crystal growth, flame propagation and fluid behavior with much of the research applicable for use on Earth.

With the advent of the International Space Station (ISS) as a research platform beginning in 2001, Glenn has continued to play a major role in microgravity research by attracting researchers of great renown and providing world-class space flight and ground based facilities. The Telescience Support Center allows researchers on Earth to command experiments aboard the ISS in the Glenn-developed Fluids and Combustion



Engineers working on the Combustion Module 1 (CM-1) racks inside the integration and test high bay area of the Telescience Support Center.

tion Facility by exchanging realtime experimental data. More information about Glenn microgravity facilities is available at <https://issresearchproject.grc.nasa.gov/>.

Courtesy of NASA Glenn History Office

News and Events



GRC-2016-C-03810

Photo by Rami Daud

Remembering Their Sacrifice

Facilities, Test and Manufacturing Director Tom Hartline shared memories about his great-uncle's bravery in the Pacific during World War II, with center employees during this year's Memorial Day Observance Ceremony, May 26. Hartline reminded employees that this holiday is about remembering those who made the ultimate sacrifice on

behalf of their country. The Veterans Awareness Committee coordinated the event that included the traditional presentation of the memorial wreath at the flagpole and color guard of Glenn veterans, including Les Carmean, Mission Support Office, pictured, bearing the U.S. Coast Guard flag.

Tech Day Highlights Achievements in Technology

More than 200 aerospace and technology representatives, local business leaders, state and local government officials and members of academia attended Technology Day at NASA Glenn, May 24. The event featured facility tours, technology exhibits and speed networking with NASA staff. Breakout sessions on the cutting-edge tech topics included biomimicry, materials for extreme environments, water technologies and the next generation of additive manufacturing at Glenn. Pictured, left to right: Glenn Space Flight Systems Director Bryan Smith, astronaut Sunita Williams and Associate Administrator, Space Technology Mission Directorate, Steve Jurczyk share a light moment during the discussion on NASA's Journey to Mars.



GRC-2016-03260

Photo by Marvin Smith

NASA Glenn Opens Its Doors

As part of its 75th Anniversary, NASA Glenn Research Center hosted two public open houses. Lewis Field opened its doors, May 21 and 22, to approximately 25,000 visitors. Plum Brook Station put out the welcome mat, June 10 and 11, to approximately 15,500 guests. Visitors talked with engineers, researchers, scientists and supporting staff; walked through several test facilities; and enjoyed hands-on activities, science demonstrations and exhibits. Astronauts Carl Walz, Doug Wheelock and Sunita Williams made special guest appearances. Hundreds of employees, retirees and affiliates made it all possible by staffing the events.

Lewis Field



"Saw airplanes and rockets and engines and all sorts of stuff. Beautiful day to see a CLE gem."
—Guest



"Very cool."
—Guest

Plum Brook Station

*"A credit to our area and our Space Program!
Thank you!"*
—Guest



*"Kudos to the staff.
To Mars and beyond!"*
—Guest



*"Thanks @NASAglen for a fantastic job today!
The whole team did a great job. The facilities
were extremely impressive!"*
—Tweeter



"Visiting Plum Brook was awesome!"
—Guest



Graphic design by Lisa Liuzzo

Photos by Bridget Caswell, Rami Daud and Marvin Smith

*On behalf of the Lewis Field and Plum Brook Station Open House Planning Teams, we thank you
for your support, hard work and tireless efforts in making these 75th Anniversary events a great
success!*

—David DeFelice, Laura Evans, Dave Taylor



NASA Glenn Workers Merit Silver Snoopy Awards for Space Work

Eight members of Glenn’s workforce recently received NASA’s prestigious Silver Snoopy award for outstanding performance and professional dedication to human spaceflight safety or mission success. Glenn Center Director Dr. Janet Kavandi joined fellow astronaut Douglas Wheelock in presenting the awards during a ceremony at the center, held May 16.

NASA’s Astronaut Office awards the Silver Snoopy pin annually to less than one percent of NASA’s eligible workforce members. Glenn’s 2016 Silver Snoopy recipients:

Christopher A. Gallo, who works in the Mechanical Systems Design and Integration Branch, for developing biomechanical simulation models to advance the understanding and application of exercise countermeasures for space flight.

Leon P. Gefert, who works in the Mission Architecture and Analysis Branch, for leadership and dedication as Orbit Mode Team scrum master to ensure successful development of the Orion Guidance, Navigation, and Control software models and overall success of the Orion human space flight mission.

Elizabeth L. Gray, an employee of Vantage Partners, LLC, supporting the Science and Space Technology Systems Branch, for constant innovation and sustained integration efforts as the Saffire International Space Station (ISS) Integration Lead on the Spacecraft Fire



GRC-2016-03260

Photo by Bridget Caswell

Pictured, left to right: Dr. Kavandi, Paulin, Hussey, Gallo, Gray, McGuire, Gefert, Miller, Pham and Wheelock.

Safety (SFS) Demonstration Project and its three payloads.

Sam W. Hussey, who works in the ISS and Human Health Office, for leadership as Glenn’s Exploration Medical Capability project manager providing overall system engineering oversight in developing the Medical Consumables Tracking (MCT) hardware for an ISS technology demonstration.

Melissa L. McGuire, who works in the Mission Architecture and Analysis Branch, for dedication and efficiency providing data enabling human mission designs beyond Low-Earth Orbit, both with the Asteroid Redirect Mission and the human Mars architecture.

Ross A. Miller, an employee of Vantage Partners, LLC, supporting the Science and Space Technology Systems Branch, for continued and sustained integration

efforts as the Saffire External Integrations Lead on the Spacecraft Fire Safety (SFS) Demonstration Project and its three payloads with Orbital ATK and the Cygnus vehicle.

Robert Paulin, who works in the Space Combustion and Materials Branch, for vast experience as a flight-certified electronics technician supporting a myriad of tests being flown on the shuttle, sounding rockets, parabolic zero-gravity flights and the ISS.

Nang T. Pham, while working in the ISS and Human Health Office, for leadership and attention to details, as the Packed Bed Reactor Experiment (PBRE) project manager, developing flight hardware and software for operations on the ISS to gain essential information on reactors behavior in microgravity. Pham is presently assigned to the Space Communications & Spectrum Management Office.

Awards

Hinckley, Ohio, trustees presented James Withrow with the 2016 Hinckley Citizen of the Year award on May 16. He was subsequently the guest of honor at the community’s Memorial Day Parade. Withrow, a project manager in the Space Science Project Office, was recognized for countless hours of planning, coordinating and assembling a phone system and communication network for interconnectivity between the community’s town hall and its police, fire and service departments. He was also cited for the numerous hours of support as a firefighter emergency medical technician and a booster for the Highland High Marching Band.



The Girl Scouts of North East Ohio presented a Women of Distinction award to Nancy Hall, ISS and Human Health Office, during a luncheon on May 20. The award honors women who go above and beyond to make our communities better places to live, work and raise a family. The women honored are selected for their achievements as business, community, and civic leaders dedicated to supporting opportunities for women and girls.

**Withrow
Named Citizen
of the Year**



Withrow



Hall

**Hall Earns
Distinction**



GLENN
RESEARCH CENTER
HALL OF FAME

Seeks Nominations for Inductees

As we continue to celebrate Glenn's 75th anniversary, a second class of honorees will be inducted into the Hall of Fame on Sept. 14, 2016. The Hall of Fame was established in 2015 to honor and recognize those who have contributed to our center's success. The Glenn History Office must receive nominations by July 15. See *Today@Glenn* for nomination guidelines and criteria.

Retirees are welcome to attend the event and although only current employees may submit nominations, retirees are welcome to work with employees to create proposals. Retirees can learn more details through upcoming *AeroSpace Frontiers* issues or call the Glenn 75th Anniversary line at 216-433-5555 or email Anne Mills in the History Office at anne.mills@nasa.gov with suggestions.

Emergency and Inclement Weather Lines
Lewis Field: 216-433-9328 (WEAT)
Plum Brook Station: 419-621-3333

Calendar

IFPTE LOCAL 28, LESA MEETING: LESA will hold its next membership meeting, Wednesday, July 13, noon, in the Glenn Employee Center's Small Dining Room.

JULY GRC CONNECTIONS: Mark your calendar for July 14 when Glenn's Vikram Shyam will give an update to employees on biomimicry research. The event takes place in the Ad Building Auditorium from 10 to 10:45 a.m. See *Today@Glenn* for more details.

GRC CENTERWIDE GOLF OUTING: The 7th Annual GRC Open Golf Outing takes place at Mallard Creek on Friday, July 22. Format will be a four-person scramble. NASA employees, contractors, retirees, friends and family are all invited to attend. The deadline for registration is July 15. Please register online at <http://ndgrcf01.ndc.nasa.gov/golf16/>. POC: John Leone, 3-5722.

VISITOR CENTER FREE EVENING: As a part of the annual Space Adventure Week (July 25 to 31) at the NASA

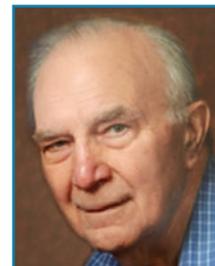
More Than a Memory

Henry "Warren" Plohr, 94, a 1979 retiree with 30 years of federal service, died March 29. A decorated B-24 Liberator pilot and U.S. Army Air Force veteran, Plohr joined the NACA Cleveland facility after graduating from college to begin a career in turbine aerodynamics. He was a member of the Space Task Group, working on the design of "Big Joe" Project Mercury capsule for the first U.S. manned space program. From 1966 to 1970 he managed the Agena rocket program. Plohr retired as chief of Spacecraft Technology. He received NASA's Exceptional Service Medal.



Plohr

Herbert W. Scibbe, 87, a 1984 retiree, who served NASA over 32 years, died April 15. Scibbe was a mechanical engineer who joined the NASA Lewis workforce after graduating from Cleveland State's Fenn College and Case Institute of Technology. Scibbe was the former head of NASA's Rolling Bearing Dynamics Section. His pioneering bearing research was lauded for Apollo and space shuttle missions. He received a 1973 NASA Honor Award for his work on Skylab.



Scibbe

Gerald L. Snyder, 77, a 1993 retiree and National Guard veteran with 33 years of federal service, died March 29. Snyder joined NASA as a price analyst. He served as chief of the Cost Analysis Office and retired as chief of the Space Flight Project Analysis Office, Office of the Comptroller. He received a 1990 NASA Honor Award for outstanding management, superior technical expertise and exemplary NASA teamwork in the design, development and operation of the Atlas/Centaur launch vehicle (AC-68).

Forrest D. Wolf, 95, a 1973 NASA retiree and U.S. Navy veteran of World War II, with more than 30 years of federal service, died March 23. Wolf joined NASA Lewis in 1944 after 2 1/2 years as a civilian with the Army Air Corps. He was primarily involved in instrument work. He was an active member and officer of the Llama Club, a public speaking group. Wolf retired as head of the Instrument Utilization Office in the Equipment & Supply Division.

Glenn Visitor Center at the Great Lakes Science Center, free general admission will be provided to the public during special evening hours on Wednesday, July 27 from 5 to 9 p.m. Special exhibits and speakers will be on hand throughout the week and that evening. Please see *Today@Glenn* for details.

NATIONAL SECURITY DAY: The Office of Protective Services invites you to attend the First Annual NASA Glenn Security Day, Aug. 2. This event is open to employees, high school/college children of employees and local first responders. To learn more and register for this event, visit www.grc.nasa.gov/nasasecurity.

SATURDAY TOURS AT LEWIS FIELD: Glenn offers free tours of its world-class facilities at Lewis Field one Saturday each month through October. Tour buses depart from the Main Gate every hour starting at 10 a.m. One-hour tours begin with a multimedia presentation in the Briefing Center Auditorium. The

Aug. 6 tour features Glenn's Graphics & Visualization and the Glenn Reconfigurable User Interface and Virtual Exploration Laboratory. For more information and a complete schedule, visit <http://www.nasa.gov/centers/glenn/events/tours.html>.

NASA RETIRED WOMEN'S LUNCHEON: The NASA Retired Women's Luncheon is Thursday, Aug. 18, 1 p.m., at Nino's Italian Restaurant, 32652 Center Ridge Road, North Ridgeville. Please contact Gerry Ziembra at gto64gerry@yahoo.com or 330-273-4850 to reserve your place.

PBS REUNION: Plum Brook Station's (PBS's) seventh reunion will be held on Saturday, Sept. 24. All current and former PBS and Lewis Field employees, support service contractors and surviving spouses are invited. Contact Bill Brown in writing, 3802 Windsor Bridge Circle, Huron, OH 44839 or email huronbill@bex.net or Jack Crooks at jackcrooks@aol.com.

National Aeronautics and Space Administration

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News and feature stories require additional time

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

Multidisciplinary COMPASS Team Celebrates 10 Years



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Melissa McGuire, front left, and Steve Oleson, front right, along with COMPASS team members, customers and Glenn leaders cheer for the team's 10th anniversary.



GRC-2016-03850

Photos by Marvin Smith

The COMPASS team celebrates 10 innovative years.

Glenn managers and customers gathered on June 3 to recognize a decade of accomplishments by a multidisciplinary concurrent team of Glenn engineers known as COMPASS (Collaborative Modeling for Parametric Assessment of Space Systems).

First assembled in 2006 to conduct a systems design study for the Lunar Surface Access Module, COMPASS has since successfully produced over 150 systems designs for various exploration and space science missions.

The COMPASS team provides concurrent engineering of aerospace systems

for NASA, government and commercial customers. The keys to COMPASS's success are the live participation of the customer and the creativity and wisdom of its team members who are matrixed from various NASA organizations.

During the recognition gathering, Center Director Dr. Janet Kavandi congratulated the team, noting their effectiveness in producing products under tight budgets and timeframes. "COMPASS is a model of ingenuity and innovation," she said. "I'm glad to be here today to celebrate with you, thank you for your work and wish you the best in the future."

Steve Oleson, who leads this conceptual spacecraft design team, showcased what he considers COMPASS's Top 10 designs over the team's history. Some of the highest profile projects include the original designs of the Asteroid Return Mission vehicle, the SCAN Testbed and the Titan Submarine. "The people on this team are everything," Oleson said. "No code comes up with these creative designs. The key is creative people in a concurrent team environment."

COMPASS does business across NASA, with industry partners and other government agencies. Their products can be tailored to support proposals, project reviews such as Mission Control reviews, system requirements reviews and implementation of technologies. For more information, contact steven.r.oleson@nasa.gov.

By Doreen B. Zudell