



Evening With The Stars Highlights Past, Present, Future

NASA Glenn's "An Evening With the Stars" program celebrated the culmination of Glenn's 75th Anniversary and welcomed the next phase of the center's history: 76 and Beyond—Shaping the World of Tomorrow.

The Ohio Aerospace Institute coordinated sponsorship for the event with more than 30 companies, universities and organizations.

Held at the Cleveland Museum of Art, Sept. 20, the third annual event featured presentations by Glenn staff and a networking reception aimed at raising the center's visibility throughout Northeast Ohio.

Center Director Dr. Janet Kavandi thanked several key people for their continued support and help in putting

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Presenter Susan Motil shares details on Glenn's current work in the Orion Program.



Associate Director Janet Watkins, left, and Director of Facilities, Test and Manufacturing Directorate Tom Hartline, right, join Ohio History Connection (OHC) Representative Becki Trivison (holding OHC certificate) in front of one of the historical markers.

Center Earns Historic District Distinction

NASA Glenn continues to celebrate its contributions to the nation during its 75th Anniversary year. On Oct. 5, the center hosted a Historic District Marker Dedication Ceremony to recognize a central area within Lewis Field designated as the Lewis Field Historic District (LFHD).

The event featured remarks from Glenn's senior leaders, a video presentation on the "Evolution of a Historic District," and a dedication of newly placed historic district markers. Representatives from the Ohio Historic Preservation Office and Ohio History Connection attended the ceremony.

"The historic district honors the dedication of past leaders such as George Lewis and Abe Silverstein and acknowledges the accomplishments of the many scientists, engineers, technicians and staff that made these advances possible," said Associate Director Janet Watkins.

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Cyber Security Ensures Our Mission Success

Today's world is more interconnected than ever. Cyber advancements help us to be more efficient and effective in our daily lives and mission operations, but impart increased risk of theft, fraud and abuse. In observance of October National Cyber Security Month, Glenn's Cyber Security Awareness Day provided many examples of these risks. As we become more dependent on information technology and computer network systems for essential operations, we must also increase our awareness of cyber vulnerability. Strengthening the security and resilience of cyberspace must be an integral part of our mission. Our success depends on our awareness and ability to address cyber risks.

Cyber security is our shared responsibility.

—Janet

Carr Leads Diversity, Equal Opportunity

Aretha L. Carr has been selected to the position of director, Office of Diversity and Equal Opportunity, effective May 29.



Carr

"Aretha has more than 26 years of relevant skills and significant experience developing agency level policy, implementing diversity strategy, serving as a consultant to leadership, and working with advisory groups," said Center Director Dr. Janet Kavandi.

Prior to joining Glenn, Carr held leadership positions as staff director, Director, Diversity and Inclusion at the Defense Logistics Agency Headquarters; director, Equal Opportunity and Diversity, at the Joint Improvised Threat Defeat Organization; and deputy director, Intelligence Community EEO Outreach and Services for the Office of the Director of National Intelligence.

Center Earns Lewis Field Historic District Distinction

Continued from page 1

Les Main, Glenn's Historic Preservation officer, said the LFHD's period of significance is from 1941 to 1972. It encompasses a time of individual research and development that led to the successful completion of the Apollo project, including placing a man on the moon. The period also includes the center's planned development reusing the semicircular roadway from the air races parking lot and architecture closely related to international style. These features

are associated with the early development of several facilities on Walcott and Taylor roadways. The research and architecture together give justification of the Historic District boundary line.

As part of the Ohio History Connection's Ohio Open Doors program, the center hosted its first series of three LFHD tours on Sept. 17, which featured Lewis Field's National Historic Landmark, the Zero Gravity Research Facility. The Ohio Open Doors program

commemorated the 50th anniversary of the National Historic Preservation Act of 1966 by highlighting landmarks that inspire pride in Ohio's amazing heritage.

Architect Crystal Montgomery, Facilities Division, has worked diligently with Main for several years to develop this significant historic distinction. Links to the map and video will be promoted on Today@Glenn as they become available.

By Doreen B. Zudell



GRC-2015-CN-00012

Photo by Mack Thomas

Glenn Researcher Nancy Hall, center, provides highlights of Glenn's National Historic Landmark, the Zero Gravity Research Facility, to visitors during the Ohio History Connection's Ohio Open Doors tours.



GRC-2016-C-07822

Photo by Marvin Smith

Left to right, Becki Trivison, Ohio History Connection; Joy Williams and Diana Welling, Ohio Historic Preservation Office; and Joe Morris, Crystal Montgomery and Les Main, Glenn Facilities Division, pose by one of the Ohio Historical Markers shortly after the unveiling ceremony.

Dr. Ruben Del Rosario Named Director of Aeronautics

Dr. Ruben Del Rosario joins the ranks of Senior Executive Service as Director of Glenn's Aeronautics Directorate, effective Oct. 16. Prior to this appointment, Del Rosario amassed extensive leadership experience managing aeronautics research programs and government test facilities and infrastructure.

Del Rosario previously served as manager of the Advanced Air Transport Technology Project (formerly Fixed Wing Project) in NASA's Advanced Air Vehicle Program of the Aeronautics Research Mission Directorate. He oversaw the project's portfolio (up to \$90

million per year) across NASA's four research centers, partnering with industry, academia and other government organizations to help define the nation's overall strategy for research and development of subsonic aircraft. Del Rosario also served as deputy manager for the Subsonic Sector of the NASA Vehicle Systems Program and project engineer for the Propulsion Element of the NASA Advanced Subsonic Transport Program.

"Ruben brings notable Glenn experience over his 25-year NASA career, including serving as chief, Facility

Management and Planning Office, responsible for Glenn research and development ground test facilities supporting aeronautics and space mission programs," said Center Director Dr. Janet Kavandi. "Please join me in welcoming Ruben and supporting him in his new position."



Dr. Del Rosario

Evening With The Stars

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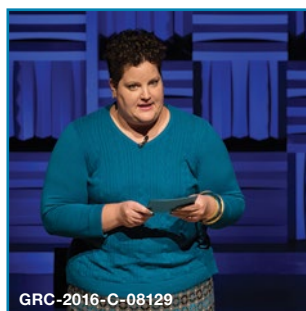
together the event. Other speakers included Director of Development, The Cleveland Museum of Art, Diane Strachan; President and CEO, Ohio Aerospace Institute, Jeffrey Rolf; and Chairman, Ohio Aerospace and Aviation Council, Dr. Carlos Grodinski. NASA Administrator Charlie Bolden sent a congratulatory video.

"Tonight, you'll hear a little bit about our past," Kavandi said. "But, more importantly, you'll hear about the research we're conducting and technologies we're developing, today, to solve the challenges of the future."

Three of Glenn's rising stars—Amy Hiltabidel, Susan Motil and Dr. James Heidmann—captivated the audience with presentations on technological achievements that centered on Glenn's 75th Anniversary theme: "Our Past, Our Present, Your Future."

Our Past: Hiltabidel, the licensing manager for NASA Glenn's Technology Transfer Office, highlighted several modern conveniences we have come to rely on in everyday life that had their genesis in NASA technologies.

Our Present: Motil, manager of the European Service Module Integration Office for the Orion Program, offered an inside look at the testing that is taking place at Glenn's Plum Brook Station Space Power Facility. She discussed the



GRC-2016-C-08129



GRC-2016-C-08140



GRC-2016-C-08143

Presenters Hiltabidel, left, Motil, center, and Dr. Heidmann share highlights on Glenn's past, present and future.



GRC-2016-C-08094

Photos by Rami Daud

Glenn leaders informally network with representatives from various companies, universities and organizations.



GRC-2016-C-08114

Dr. Kavandi welcomes guests and thanks several key people for their support in putting together the event.

current testing, what is on the horizon and what it means for Glenn, and the future of deep space exploration.

Your Future: Heidmann, acting manager of NASA's Advanced Air Transport Technology Project, shared NASA's vision for the aircraft of the future. He put a spotlight on NASA's pioneering technology in developing alternative airframes and propulsion systems to make air travel greener and quieter around the world.

In closing remarks, Kavandi said the presenters are examples of the kind of people that drive Glenn's cutting-edge research and technology development.

"NASA's accomplishments, past, present and those in the future, are the accomplishments of people," she said. "And, people, like those you've met tonight, are NASA's most valuable resource."

By Doreen B. Zudell

News and Events

Day Focuses on Cyber Security Awareness



GRC-2016-C-08191

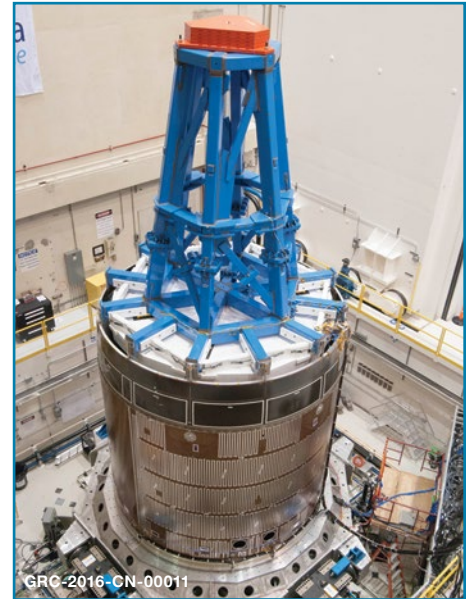
Photo by Bridget Caswell

O'Neil and George Crawford, Glenn's Counterintelligence lead special agent, participate in a Q&A session.

Brian O'Neil, from the U.S. Secret Service, headlined Glenn's 2016 Cyber Security Awareness Day, Oct. 5. He explained how domestic and foreign agencies collaborate to deter known perpetrators and opportunities for malicious cyber attacks. Sponsored by Glenn's Office of the Chief Information Officer (CIO), the event offered employees a sobering look at cybercriminal activity and necessary training to reduce cyber risks. Glenn CIO, Sean Gallagher, discussed the center's latest efforts to maintain cyber vigilance. Additional presentations from Glenn's Counterintelligence Office and Export Control focused on best practices and NASA procedures for avoiding theft of sensitive/classified material while on travel.

Plum Brook Shakes Up Orion Test Article

Engineers at Plum Brook Station recently finished a series of tests on a full-size test version of Orion's service module to verify that it can withstand the vibrations it will experience when it launches and travels into space atop the Space Launch System (SLS) rocket. The 13-ton service module, pictured, is an essential part of the spacecraft. It will propel, power and cool Orion in addition to providing air and water for the crew. For more information on this test, visit <http://go.nasa.gov/2e0g0kH>.



GRC-2016-CN-00011

Glenn Celebrates Hispanic Heritage Month



GRC-2016-C-08202

Photo by Rami Daud

NASA's Johnson Space Center Director Dr. Ellen Ochoa was the featured speaker for Glenn's Hispanic Heritage Month Observance, Sept. 29. Ochoa, a veteran astronaut of four space flight missions, related this year's theme "Hispanic Americans: Embracing, Enriching, and

Enabling America" to life experiences leading to a rewarding career with NASA. Coordinated by Glenn's Hispanic Advisory Group (HAG), the celebration also included lunch with Dr. Ochoa, center, pictured with several Glenn senior managers and HAG members.

Combined Federal Campaign Upcoming Events

Plum Brook Station Festival

Wednesday, Nov. 9
11 a.m. to 1 p.m.

Multicultural Day and International Food Fair

Thursday, Nov. 17
11 a.m. to 1 p.m.

Keynote address:
12 to 12:30 p.m.



Pancake Breakfast and Baked Goods Auction

Thursday, Dec. 8
7:30 to 9:30 a.m.
Bldg. 15 Cafeteria

Baked Goods
Auction:
9 to 9:30 a.m.



"55% is SWEET!"

Participation Incentive
Organizations with at least 55 percent participation in 2016 CFC will receive home-made baked goods at one staff meeting. Several organizations have already exceeded 55 percent!



Experiments Take Residency on ISS

The Cygnus spacecraft lifted off on its resupply mission to the International Space Station (ISS), Oct. 17, carrying with it three experiments designed at NASA Glenn: Aerosol Sampling Experiment, Cool Flames Investigation and Spacecraft Fire Experiment-II (Saffire-II).

The Aerosol Sampling Experiment is the first air quality experiment to operate on the space station. It will provide data on the quantity and size of inhalable particles in the space station's ambient air. High concentrations of inhalable particles can cause the crew respiratory and eye irritation. This experiment will improve understanding of cabin air quality and lead to enhanced air quality monitoring systems for future missions.

Cool Flames is an investigation into a phenomenon where some types of fuels initially burn very hot and then appear to go out, but actually continue to burn at a much lower temperature with no visible flames. Understanding cool flame combustion helps scientists develop cleaner, more efficient engines and fuels.



Glenn researcher, Marit Meyer, holds an active sampler that is part of the Aerosol Sampling Experiment.

Saffire-II is the second in a series of experiments to ignite a large-scale fire inside an empty Cygnus resupply vehicle, after it leaves the space station, to improve understanding of fire growth in microgravity and safeguard future space missions.

For more information about the mission, visit <http://www.nasa.gov/orbitalatk>.

By Jan Wittry

Trending With Tech Transfer Technology Poised to Transform Aerospace Industry



NASA Glenn recently signed nonexclusive commercial licensing agreements with Imitec, Inc. of Schenectady, New York, and Jetoptera, Inc. of Mason, Ohio.

The license with Imitec includes the development, manufacturing and distribution of a new resin transfer moldable polyimide (RTM-370) to end users, who will use the new material to make high-performance components, primarily for aerospace applications.

The license with Jetoptera, Inc. includes use of Glenn's breakthrough SiC-SiC ceramic matrix composites (CMCs) in the engines and other propulsion

system components of unmanned aerial vehicles (UAVs) and passenger aircraft. This license agreement will significantly increase the use of the Glenn-developed "Sylramic-iBN" SiC fiber, which forms the reinforcement of these CMCs.

If you want to learn more about licensing, or if you are working on a technology with potential applications beyond a NASA mission, please contact Amy Hiltabidel at grc-techtransfer@mail.nasa.gov.

Submitted by Glenn's Technology Transfer Office.

Ombuds Aid in Issue Resolution

Do you have an issue or concern and are unsure who to call to obtain a resolution? Sometimes an informal chat about workplace issues can achieve more than trying to span formal channels of communication.

The Glenn Ombudsman Program provides employees with a confidential and informal place to raise concerns they might have regarding safety, organizational performance or mission success. This program complements the center's formal processes and provides an alternative to be heard and pursue options for issue resolution.

Harvey Schabes and Gwynn Severt have recently been selected to serve as Glenn Ombuds. They join Marsha Nall, who has served as a center Ombuds since January 2014.

Contact Nall (3-5374), Schabes (3-5309) or Severt (3-8310) to arrange a time to get together at a comfortable location. For more information on the Ombuds Program, see <http://ombuds.grc.nasa.gov>.

By Doreen B. Zudell



Nall



Schabes



Severt

Glenn Contributions to Successful Use of ISS Rewarded

Kirk Shireman, International Space Station (ISS) Program manager, and Julie Robinson, ISS chief scientist, visited Glenn, Aug. 25, to recognize the collective contributions by Glenn personnel for the continued safe and efficient operation of the ISS.

Shireman and Robinson presented certificates for the Space Flight Awareness (SFA) Team Award to team representatives that cited, “for exceptional performance and dedication in the development, delivery and safe operation of research experiments and technology demonstrations, the return of significant research data from those investigations, and the sustainment of the Electrical Power Systems (EPS) on the International Space Station from 2010 through 2014.”



Robinson and Shireman, far left, front and back row, respectively, pose with Glenn personnel for the SFA Team Award.

Promotions



Dr. Kremic



Dr. Moder

Dr. Tibor Kremic has been selected chief, Space Science Project Office, Space Flight Systems Directorate. Kremic has acquired significant space science leadership experience as assistant division director for the NASA Headquarters Planetary Science Division and most recently as Glenn's senior science manager in Code MA.

Dr. Jeffrey P. Moder has been selected chief, Engine Combustion Branch, Research and Engineering Directorate. Moder has extensive leadership experience within NASA's aeronautics and space propulsion programs. Among them, technical lead for Analysis Tools under the Cryogenic Propellant Storage and Transfer and Evolvable Cryogenics projects and for Combustion under the Aeronautical Sciences and Transformational Tools and Technologies projects.

Cost Analysis Awards

Glenn's Betsy Turnbull and Jon Drexler were recognized for outstanding service during NASA's Cost Symposium, hosted by NASA Glenn, Aug. 23 to 25. Turnbull received the agency's Cost Estimating Rising Star Award and Drexler received the Cost Estimating Team Award. Center Director Dr. Janet Kavandi was the keynote speaker for the symposium that gathered 130 participants from the agency's estimating and analysis community to exchange ideas, best practices, methodologies and lessons learned.



GRC-2016-CN-00003

NASA Chief Financial Officer, David Radzanowski, presents the awards to Turnbull and Drexler.



GRC-2016-CN-00004 Photos by Lawrence Wolfarth, HQ

Congratulations NASA Glenn!

For the second year in a row, the Commission on Economic Inclusion, a program of the Greater Cleveland Partnership (GCP), has selected NASA Glenn as its 2015 “Best-in-Class” award winner in the Supplier Diversity government/nonprofit organization category. Center Director Dr. Janet Kavandi accepted the award during a ceremony at GCP's annual meeting, Sept. 7. The award is based on survey results from commission members who participated in the Commission on Economic Inclusion's 2015 Employees Survey on Diversity. The survey measures three critical aspects—CEO commitment, managers' accountability and business outcomes—of a successful diversity and inclusion strategy.



More Than a Memory



Chelko

Louis J. Chelko, 95, a 1978 retiree with 34 years of service, died Sept. 8. Chelko was a veteran of World War II who joined NACA in 1944 as a mechanical engineer. He tested fuel mixtures to enable the P47 Thunderbolt piston engine to fly at higher altitudes during wartime. He also worked on jet propulsion and rocket engine noise reduction. After retiring, he returned as a contractor to support NASA's collaboration on a state-of-the-art ground communication center for military satellites.



Freedman

Robert J. Freedman, 72, a 2007 retiree with 39 ½ years of service, died Aug. 19. He was an electrical engineer and member of NASA Lewis' Propulsion Systems Integration Group. He was recognized for supporting Allison's LIFTAN nozzle development inside the Aero-Acoustic Propulsion Laboratory critical to the Joint Strike Fighter program. As a member of the 8x6 Laser Velocimeter Team, he was recognized for installing and designing the laser system for use with propellers as part of the Advanced Turboprop Project.



Kuivinen

David Kuivinen, 80, a 1992 retiree with 32 years of service, died Sept. 16. Kuivinen was a veteran of World War II who joined NASA after completing a chemistry degree. He retired from the Office of Environmental Programs where he was recognized for his dedication to assuring a healthful environment for employees. He managed the Asbestos Abatement Program as a member of the Environmental Health Team and provided communications support to the Hazardous Chemicals Office. He was also the Area 6 Safety Committee chairman.



Riedel

Paul F. Riedel, 84, a 1992 retiree with 40 years of federal service, died July 31. Riedel was a U.S. Army veteran of the Korean Conflict who retired as deputy branch chief of the Photographic and Printing Branch. He was a prolific still photographer and mentor who won the agency's 1985 Energy Awareness Week photo contest, "America's Energy Picture." Using a special lens, he captured a majestic view of three 200-kilowatt wind turbine systems that NASA installed and managed across the country.

Connect With Glenn



Emergency and Inclement Weather Lines

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

Corrections

The following errors were found in the October 2016 *AeroSpace Frontiers* Honor Awards section - page 6, first column: Patrick Spanos citation; and page 8, second column: The "Fleet Management and Transportation Team" citation. On page 9, the Diversity Leadership Award was inadvertently listed twice, citing the 2016 and 2015 winners. The 2016 recipient is the "GRC Higher Education University Affairs Team." An updated version of this issue can be found online at <http://www.nasa.gov/centers/glenn/news/AF/index.html>.

Retirements

Michael Hathaway, Turbomachinery and Turboelectric Systems Branch, Propulsion Division, retired Sept. 30, 2016, with 34 years of service.

Annie Delgado-Holton, Integration Office, Safety and Mission Assurance Directorate, retired Sept. 22, 2016, with 16 ½ years of service.

Steven Johnson, Power Architecture and Analysis Branch, Power Division, retired Oct. 15, 2016, with 31 years of service.



Johnson

Calendar

FEHB OPEN SEASON HEALTH FAIR: The Office of Human Capital Management will host a Federal Employee Health Benefit (FEHB) Open Season Health Fair on Tuesday, Nov. 15, from 10 a.m. to 2 p.m. in the Upper Level of the Main Café. POC: Rhonda Billick, 3-6286.

GIVE THE GIFT OF LIFE: The next on-site Red Cross Blood Drive takes place on Wednesday, Nov. 16 and Thursday, Nov. 17, from 10:00 a.m. to 3:30 p.m. in the Administration Building Auditorium. POC: Rhonda Billick, 3-6286.

RETIRED WOMEN'S LUNCHEON: The next NASA Retired Women's Luncheon is Thursday, Nov. 17, at 1 p.m., at O'Charley's Restaurant, 8913 Pearl Road, Strongsville. Contact Gerry Ziemba at gto64gerry@yahoo.com or 330-273-4850.

DECEMBER SIREN TESTING: The Emergency Management Office staff will conduct the Lewis Field outdoor "voice" test at Buildings 100 and 302 on Wednesday, Dec. 7. An audible siren test focusing on the "Emergency Condition" tone will be held at Lewis Field on Saturday, Dec. 3. POC: Allen Turner, 3-6826.

IFPTE LOCAL 28, LESA MEETING: LESA will hold its next membership meeting, Wednesday, Dec. 14, noon, in the Glenn Employee Center's Small Dining Room.

National Aeronautics and Space Administration

John H. Glenn Research Center at Lewis Field

21000 Brookpark Road
Cleveland, Ohio 44135

www.nasa.gov

AeroSpace Frontiers is an official publication of Glenn Research Center, National Aeronautics and Space Administration. It is published the second Friday of each month by the Office of Communications & External Relations in the interest of the Glenn workforce, retirees, government officials, business leaders and the general public. Submit short articles and calendar items via e-mail to the editor: doreen.b.zudell@nasa.gov or 216-433-5317.

December 2016 Calendar section deadline: Nov. 18, noon
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>

Plum Brook Reunion

More than 150 former Plum Brook Station (PBS) civil servants and support service contractors and their families socialized and reminisced at PBS's seventh reunion, Sept. 24. Retirees Bill Brown, Al Buggele, Jack Crooks, Jim Hurst, Harry McCune and Hank Pfanner, coordinated the day's activities. Following welcoming remarks, PBS Deputy Director Dave Taylor updated attendees on the station's role in supporting current and future NASA missions, including the Journey to Mars. Reunion highlights included a catered luncheon, alumni photo, tour of facilities and NASA souvenirs for purchase through the NASA Glenn Exchange.

