



# Social Showcases Glenn-Led Alternative Fuel Research

## Research Supports Aeronautics' Strategic Vision

Social media followers and news media representatives from across the United States, Canada and the United Kingdom traveled to Southern California, May 20. They gathered to learn about a NASA Glenn-led flight experiment that is investigating the effects of alternative fuels on the environment.

Held at NASA's Armstrong Flight Research Center facilities in Palmdale and Edwards Air Force Base, California, the NASA social focused on Alternative Fuel Effects on Contrails and Cruise Emissions, or ACCESS II. This research supports NASA Aeronautics' strategic vision, which includes the goal of enabling the aviation industry to transition to low-carbon fuels and alternative propulsion systems.

During the NASA social, Glenn's Dr. Rubén Del Rosario, NASA Aeronautics Subsonic Fixed Wing project manager who oversees the research, met with participants about ACCESS II. Members of the experiment's Glenn team also include Dr. Clarence Chang and Angela Surgenor.

Continued on page 2

*Pictured: Glenn's Dr. Del Rosario briefs social media followers and news media about the ACCESS II experiment during the event at NASA Armstrong.*



Photo by Frank Jennings



*Advancing inclusion.  
Achieving results.™*

## Center Recognized for Diversity and Inclusion

### Creating, Enhancing, Sustaining Diversity

NASA Glenn has been designated a member of the 2014 Commission 50 by the Greater Cleveland Partnership's Commission on Economic Inclusion.

Members of the Commission 50 (25 for-profit and 25 nonprofit/ government) are recognized annually for progress in creating, enhancing and sustaining their diversity and inclusion strategies.

This recognition is based on their responses to the annual Employers Survey on Diversity. Member organizations with the highest combined scores based on the survey's four metrics—board, senior management, workforce and supplier diversity—receive this distinguished designation.

## Lean Six Sigma Processes Improve Efficiencies

Need to make some changes but you're not sure how or where to get started? NASA's Lean Six Sigma (LSS) Program Office wants to help you gain the skills you need to get moving in the right direction.

LSS is a structured approach to identifying and eliminating waste. NASA has adopted this methodology

and created a curriculum to train employees how to employ a five-step method to increase process speed, eliminate waste, reduce variation and improve customer satisfaction.

"We have the tools, but our customers are the process owners," said Michael

Continued on page 8

## In This Issue

Tutor Collects Books .....	2
Creativity Takes Root .....	3
NASA Center Renamed .....	3
Celebrating Asian Heritage .....	4
SMEs Take to the Road.....	5
Jeopardy! Seeks Answers.....	5

# Koch Collects Books to Encourage Joy of Reading

## FEB Tutoring Program

As a tutor in the Cleveland Federal Executive Board (FEB) Tutoring Program over the past 7 years, Danielle Koch, Acoustics Branch, has seen how lack of resources can hinder hope and learning. To fill the void at Cleveland's Clark Elementary School, Koch has been collecting and donating thousands of new/used books and magazines to inspire students and encourage a joy of reading. On May 7, she delivered two more boxes of books and magazines to school principal, Amanda Rodriguez, bringing her total donations to well over 5,000 items.

While Koch takes pride in this initiative, she gratefully attributes much of her success to the generosity of others inspired by her mission. "I've been fortunate to have the support of my Glenn coworkers, family and friends," she said. "My branch chief, Brian Fite, allowed me to set up collection boxes and post messages on Today@Glenn."

News of Koch's book collection provided Isabella Piasecki, the daughter of Jerry Piasecki, NASA Safety Center, with a partner to donate the books she had collected for her Girl Scout Silver Award. Isabella reached out to family and friends, her Girl Scout Service Unit 732, the Brecksville/Broadview Heights School District and Preschool

Moms Club and the Cuyahoga County Public Library to collect nearly 2,000 new/used books to benefit Clark students and families.

Koch is one of 34 Glenn tutors currently supporting the FEB Tutoring Program. The program focuses on K-8 students in the Cleveland Municipal School District to improve reading and math comprehension and performance, areas determined to have the greatest impact on a child's education, in addition to science and social studies.

Employees interested in supporting the FEB tutoring program should contact Lynne Sammon, Office of Educational Programs, 216-433-3952, to see how they can make a difference. Additionally, watch for future book collection dates and locations on Today@Glenn.

—By S. Jenise Veris



Photos by S. Jenise Veris



Top: Koch, right, rolls in her latest book contribution, while Piasecki and her dad, Jerry, begin unloading her donations.

Above: Koch, left, presents Piasecki a NASA poster commemorating astronauts, who were former Girl Scouts, in appreciation of her donation. Clark principal Rodriguez and Glenn FEB Tutor Program manager Sammon are also pictured.

## Alternative Fuel Research



Photo courtesy of National Research Council of Canada

Continued from page 1

NASA Langley's Bruce Anderson, ACCESS II chief scientist and principal investigator, and NASA Armstrong's Gary Martin, deputy project manager for the Fixed Wing project, joined in the discussions. In addition to a full briefing of the experiment, participants also asked questions of aircraft crew, pilots and scientists involved in the research process.

For more information on the event, visit [http://www.nasa.gov/centers/armstrong/Features/ACCESS\\_II\\_showcase.html](http://www.nasa.gov/centers/armstrong/Features/ACCESS_II_showcase.html). For more information about the ACCESS II project, visit <http://1.usa.gov/1gRxQfz>.

The crew of National Research Council of Canada's CT-133 research aircraft (front) captures NASA HU-25C Guardian "sniffing" the contrails and emissions of NASA's DC-8. Collected data is stored for analysis by ACCESS II researchers.

# Creativity and Innovation Initiative Takes Root

Seeds take nurturing to grow, but when they take root, it is inspiring to see the growth of new life. NASA Glenn's Creativity and Innovation (C&I) Initiative is much like seeds taking root. Born of a grass-roots effort in 2011, and tended by volunteers throughout the center, the C&I Initiative has spread, creating a culture of creativity and innovation.

The seed tenders are a group of passionate researchers, artists, engineers, writers, managers and administrative specialists who have rallied to make Glenn a crusader of all things new, creative and innovative. That passion is spreading. The team's membership, which started with two researchers interested in spreading creativity and innovation

methods throughout the center, has grown to more than 100. The team has responded to numerous requests from various organizations across the center to facilitate idea generation, or "Ideation" sessions.

"Ideation sessions are different from traditional problem-solving sessions," said C&I member, Nikki Welch. "We use parallel and lateral thinking tools as an approach to break out of traditional thinking pathways. This enables us to generate new and creative problem solving ideas."

Welch said the team's primary tools are derived from the teachings of Dr. Edward de Bono, a world-renowned authority on creative thinking. The C&I team's certified trainers have used de Bono's Six Thinking Hats and Lateral Thinking tools to teach these methods to numerous center employees. To date, 64 employees have been trained directly by de Bono master trainers.

The team has held Ideation sessions with Glenn organizations, other NASA centers and external organizations. Several sessions were incorporated into

workshops aimed at tackling technical issues and improving collaboration and communication.

During a multiday Electric Aircraft Workshop held at the Ohio Aerospace Institute, for example, the C&I Ideation Team helped plan and facilitate each of the sessions using the Six Thinking Hats framework. From these sessions, participants began identifying Glenn's strengths and capabilities in technologies related to electric aircraft.

"The C&I facilitators did a great job, and without your effort the [Electric Aircraft] workshop would not have been a success," said Dr. Ajay Misra, chief, Structures and Materials Division. "You asked the right questions during the brainstorming sessions, and we obtained good answers from the participants. You have made me a big fan of the Six-Hat process."

The team has also introduced creative spaces that are available for use center-wide. The Creativity & Innovation Commons (CIC), a collaborative work environment designed to spark innovative thinking, comprises a large 25-person meeting area and four smaller work areas. The iLab, located in Building 5, Room CW-12, is a second creative space that allows staff to prototype hardware and run proof-of-concept bench-top experiments. Both spaces are available for use by the Glenn community.

To learn more about C&I initiatives, reserve creative spaces, request facilitation or join the team, visit the C&I Web site at <https://ci.grc.nasa.gov/>.

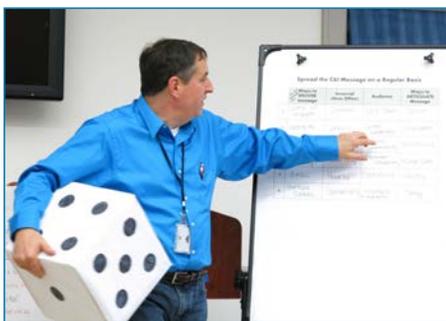


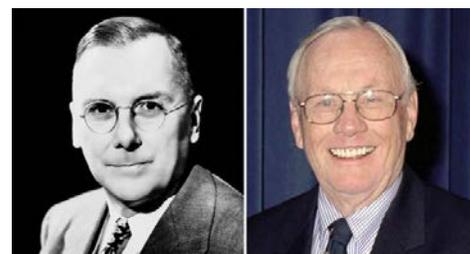
Photo courtesy of Creativity and Innovation Initiative Team

*Top: Jim Zakrajsek creatively explains a new lateral thinking tool.*

*Left: Irebert Delgado leads a NASA Centennial Challenge Ideation Session.*

## NASA Dryden Renamed Armstrong Flight Research Center

In January, President Obama signed a congressional resolution renaming NASA's Hugh L. Dryden Flight Research Center as the Armstrong Flight Research Center. Additionally, the center's West Aeronautical Test Range has been designated the Hugh L. Dryden Aeronautical Test Range. NASA Administrator Charlie Bolden joined members of the Armstrong and Dryden families in a dedication ceremony at Edwards Air Force Base, Calif., May 13. With this honor, Armstrong shares the distinction of a NASA center named for him along with fellow Ohioan Sen. John H. Glenn. For details on the renaming, visit <http://www.nasa.gov/centers/armstrong/news/news/NewsReleases/2014/14-12MA.html#.U6xE7iRpHVQ>.



Dryden

Armstrong



Photo by Mack Thomas



2014-2460

Photo by Michelle Murphy

### Center Supports Asian Pacific American Heritage Festivities

NASA Glenn employees supported Asian Pacific American Heritage festivities throughout the month of May. Glenn's Asian Pacific Islanders Advisory Group (APIAG) and other Glenn volunteers staffed a NASA informational booth and a Picture Yourself In Space kiosk at the 5th annual Cleveland Asian Festival, May 17 and 18. Glenn's Wayne Wong served as Master of Ceremonies. Pictured, top left: Dongming Zhu, front, and Ghansham Dutt at the festival. On May 29 the APIAG hosted Ratanjit Sondhe, author, entrepreneur and founder of Discoverhelp, Inc., and musicians Nupur Das and Manabendra Dey for Glenn's annual Asian Pacific American Heritage Observance. Sondhe (pictured, top right) gave the keynote speech on the topic of "Diverse Leadership + Expanding Opportunity."



Photo by John Oldham



Photo by John Blakeman

### Sharing NASA's Mission at Space Fest 2014

NASA astronauts and Glenn employees shared NASA's mission with nearly 11,000 visitors attending "Space Fest 2014" at the National Museum of the U.S. Air Force, Wright Patterson Air Force Base, May 16 and 17. Astronauts Greg Johnson, Don Thomas and Doug Wheelock engaged the public through mission presentations, autographs and their personal critique of the movie, *Gravity*. Glenn employees staffed a NASA career/information table, picture booth and several activities/exhibits throughout the 2-day festival. Pictured: Bryan Palaszewski presents a historical perspective of the space shuttle to the backdrop of the museum's new shuttle Crew Cockpit Trainer in the Space Vehicle Mockup Facility. The event helped NASA to communicate its mission objectives to the general public.

### Glenn Helps Preserve History

Plum Brook Station staff recently preserved a slice of local history by donating five of its shingle oak seedlings to Thomas Alva Edison's birthplace in nearby Milan. Edison's father, Samuel, settled in Milan due to the abundance of shingle oak trees in the surrounding area and established himself as a manufacturer of roof shingles. The seedlings were planted on the property now known as the Thomas Edison Birthplace Museum. When the trees begin to mature in 2 to 3 years, they will become a noteworthy aspect of the history and landscape.

## Solving Challenges Through Roadshows

NASA Glenn's Venture Development and Partnerships Office is taking an innovative approach to economic development and job creation through the NASA Roadshow. Under the initiative, Glenn scientists and engineers go on the road and offer expertise to businesses that are stuck on engineering or technological challenges. A small group of NASA subject matter experts (SMEs) traveled to the University of Toledo's engineering campus, June 12, to assist area companies solve technical challenges. The NASA Roadshow kicked off in Youngstown last December; several more are planned for fiscal year 2015.



*Glenn's Dr. Felix Miranda, center, and Jackie Morse, to his right, talk with representatives from Cooper Tire about the company's technical challenges.*

## Celebrating Young Graduates



Photo by Doreen Zudell

Associate Director Janet Watkins recently shared a special time with Lewis Little Folks students. On June 6, 16 preschool and 12 kindergarten students graduated from the onsite child development center during a ceremony at the Picnic Grounds. Watkins encouraged the graduates to continue working hard in school while taking time for play.

## Jeopardy! Gets Answers at Glenn



2014-2460

Photo by Michelle Murphy

The Clue Crew from Jeopardy! filmed at NASA Glenn during a 2-day, four-location shoot in Cleveland, April 23. Correspondents Sara Whitcomb Foss, pictured, and Kelly Miyahara talked to Glenn researchers and visited several Lewis Field buildings to film video clues that will air on future episodes of the game show. Stay tuned to *Today@Glenn* for Jeopardy! air dates.

## Attention Glenn Musicians: Join the Band!

In the 1960s, the Lewis Research Center had a band that played at social activities and center events. Recently, a group of employees has expressed an interest in continuing this tradition by forming a band or small orchestra. Consider joining a pool of musicians who have a desire to perform, record or just jam together! Employees (civil servant or contractor) and retirees who play a musical instrument (novice or accomplished) and enjoy the camaraderie of playing with others are invited to join. Family members are also welcome. For further information, please contact Jeff Woytach at 216-977-7075 or [Jeffrey.M.Woytach@nasa.gov](mailto:Jeffrey.M.Woytach@nasa.gov).



## Awards & Honors



The Composite Cryotank Technology Demonstration (CCTD) Project Team received the Rotary National Award for Space Achievement (RNASA) Foundation Stellar Award on April 11. The RNASA Stellar Awards recognize individuals and teams whose accomplishments hold the greatest promise for furthering future activities in space. The CCTD team, including members from NASA's Glenn, Marshall and Langley centers, and Boeing, was recognized for outstanding technical excellence in the development and demonstration of low-cost, lightweight composite cryogenic propellant tanks for future heavy-lift vehicles and other in-space applications.

*Careers & the disAbleD* magazine honored Duane Schaft, Office of Chief Financial Officer, among its 2014 Top 10 National Employees of the Year during a ceremony in Boston, April 28. The magazine recognizes professional and personal achievements of outstanding individuals with disabilities in the public and private sectors.



Schaft



Gassaway



Gigante

The Cleveland Chapter of the National Technical Association (NTA) honored two Glenn employees with Nsoroma Awards during its 2014 Nsoroma Technical Symposium and Awards program, June 7. Janice Gassaway, Program/Project Integration Office, received the Lifetime Achievement Award. Bethany Gigante, Energy and Environmental Management Office, received the Princess Award. NTA vice-president and chairman for the event Dr. Bilal Bomani, Fluid Physics and Transport Processes Branch, joined NTA President Dr. Lateef Saforre in presenting the awards.

## Welcome to the NASA Family

Glenn welcomed the following new employees and the Pathway and Veteran interns who reported for duty/orientation during the month of May. *Editor's note: The new hires in the month of June will be featured in the next issue.*

May hires include: Brianna Artino, Procurement Division; Jeremy Holmes, Engineering Management Branch; Joshua Jones, Wind Tunnel and Propulsion Test Branch; Jennifer Lademann, Center Operations Branch; Nicholas Lantz, Avionics Systems Branch; Kyle Lynch, Space Combustion and Materials Branch; Shaun McKeegan, Integration Office; David Meigs, Engineering Management Branch; Christopher Miller, Sensors and Electronics Branch; Dale Mortensen, Aerospace Communications Systems Branch; Ryan Shackle, Accounting and Reports Branch; Aayush Sharma, Mission Design and Analysis Branch; Craig Smith, Ceramics Branch; and Nathan Williams, Systems Integration Branch. (Organization affiliations listed are at the time of installation and prior to the Glenn reorganization.)



2014-2095

Left to right: Mortensen, Lademann, Artino and Smith.



2014-2252

Left to right, front: Lantz, Meigs, Shackle, Williams and Jones; back: Lynch, Sharma, McKeegan, Holmes and Miller.

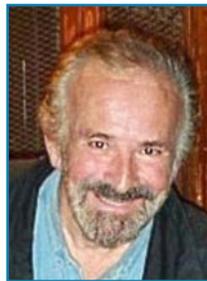
Photos by Bridget Caswell

## More Than a Memory

**Virden C. Beckman**, 94, a 1972 retiree with 29 years of service, died Feb. 19. Beckman was a U.S. Army veteran and an electrical engineer. He supported NASA's Launch Vehicles Office for the Centaur, Mars Mariner and Titan/Centaur programs. He received several Cost Reduction Awards for his ingenuity, which helped NASA improve costs and efficiencies within several of the programs. Beckman also volunteered at the NASA Glenn Visitor Center for more than 15 years.



Beckman



Bloomfield



Manning



Spurlock

**Harvey S. Bloomfield**, 75, a 1998 retiree with 37 years of service, died March 27. Bloomfield was a chemical/nuclear engineer, whose expertise benefitted the SP-100 nuclear space power program. He was an expert in the specification and evaluation of the free-piston Stirling and Brayton Cycle energy conversion subsystems used for a highly integrated nuclear power systems configuration. He received NASA's Exceptional Service Medal and numerous achievement awards. Bloomfield retired from the Thermo-Mechanical Systems Branch.

**Eugene R. Brattoli**, 84, a 1987 retiree with 32 years of service, died May 11. Brattoli was a U.S. Air Force veteran of the Korean War. He graduated from the Apprentice Program to become an electronics technician. He was a member of the Test Installation Division, who worked predominantly in the Icing Research Lab and earned numerous performance and special achievement awards. Brattoli captained the Jets, a Lewis softball team, that dominated the league for many years.

**James E. Loeser**, 83, a 1982 retiree with 30 years of service, died April 7. Loeser began his NASA career in 1952 before entering the Apprentice Program, where he graduated as a stationary engineer in 1958. He was responsible for the operations and maintenance of the Icing Research Tunnel.

**Lillian A. Manning**, 90, a 1994 retiree with 28 years of service, died in Oct. 29, 2013. Manning was a proficient secretary who began her career in NACA Lewis' Personnel Records Department. She was recognized for her support in several group achievement awards. She retired in the Aeropropulsion Technology and Facilities Division.

**O. Frank Spurlock**, 74, a 1997 retiree with 35 years of service, died May 29. Former deputy chief for Systems Analysis, Advanced Space Analysis Office, Spurlock was a respected supervisor, mentor and mathematician supporting NASA's launch vehicle program. He wrote the 3D computer program used to calculate performance and trajectories for Atlas Centaur and Titan Centaur launch vehicles for almost 30 years. A memorial mass is scheduled for Saturday, July 12, 11 a.m. at St. Thomas More Church, 4170 North Amber Drive, Brooklyn, Ohio 44144.

## Calendar

**SPACEADVENTUREWEEK:** Celebrate space exploration with a week of space-themed events, programs and workshops, July 21 through July 28. Explore the space-themed exhibits in the NASA Glenn Visitor Center and hear guest speakers from NASA Glenn.

**MIC OPEN HOUSE:** The Mission Integration Center (MIC) ribbon cutting ceremony and open house is Wednesday, July 30, beginning at 10 a.m., building 162.

**AUGUST PUBLIC TOUR:** The next Saturday tour, Aug. 2, will highlight the Aero-Acoustic Propulsion Laboratory. Tours are open to U.S. citizens and lawful permanent residents. Space is limited and reservations are required for admission. To register,

call 216-433-9653 or send an email to [sean.r.delaney-gesing@nasa.gov](mailto:sean.r.delaney-gesing@nasa.gov). For more information and a complete schedule of Glenn's tours, visit <http://www.nasa.gov/centers/glenn/events/tours.html>.

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

**RETIRED WOMEN'S LUNCHEON:** The NASA Retired Women's Luncheon is Thursday, Aug. 21, at 1 p.m. at Mapleside Farms Orchard House Restaurant, 262 Pearl Rd., Brunswick. Luncheons are held February, May, August and November. All are welcome. Please confirm your reservation by calling Gerry Ziembra, 330-273-4850.

## In Appreciation

Thank you so much for your kind wishes and words upon my retirement. I am sure I will be corresponding with many of you in the future. It has been great to work with you over the years.

—Don Roth

On behalf of my family and myself, I am deeply thankful to all who so generously donated leave time over the past 18 months. It was my time of greatest need and therefore impossible to fully convey my appreciation of the NASA Glenn family—there is no equal. "Gratitude is the memory of the heart."  
~Jean Baptiste

—Kate and David Dunlap



## National Aeronautics and Space Administration

### John H. Glenn Research Center at Lewis Field

21000 Brookpark Road  
Cleveland, Ohio 44135

[www.nasa.gov](http://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](mailto:doreen.b.zudell@nasa.gov) or 216-433-5317.

**August 2014 issue copy deadline: July 18, noon**

Editor: **Doreen B. Zudell**, SGT, Inc.

Assistant Editor: **S. Jenise Veris**, SGT, Inc.

Managing Editor: **Kelly R. DiFrancesco**



Read *AeroSpace Frontiers* online at <http://aerospacefrontiers.nasa.gov>

# Lean Six Sigma Processes

Continued from page 1

Moxley, NASA's LSS program manager. "We walk a customer through the LSS process—define, measure, analyze, improve and control—to help them discover a way forward to meet their goals."

Two recent LSS projects that met with great success, include the Plum Brook Station (PBS) Bunker Deconstruction and Lewis Field Gas Cylinder Reclamation projects, both previously highlighted in the *AeroSpace Frontiers*.

Using LSS tools, the Cylinder Reclamation Project team determined areas of improvement, and then they used LSS tools to prioritize their solutions. For the PBS Bunker Project, several data-driven tools were used, including the Pareto chart. This tool showed which customers used the most square footage of storage to develop their marketing strategy of likely users. More recently, the LSS team consulted on the reconfiguration of the Graphics & Visualization Lab.

Moxley said LSS members have consulted within every directorate of the center, averaging 20 events per year. Yet, some misconceptions still abound.

"First, we want to stress that there is no cost for LSS services because the customer performs the labor," Moxley said. "Second, while some employees

may view 'lean' and 'eliminate waste' as job threatening, it is actually an opportunity to redirect efforts to focus on more value-added work."

In addition to consulting, the Glenn LSS team's primary responsibility is training center employees. They do this through Green Belt and Black Belt training programs. Students learn the LSS methodology and then obtain their certification by completing LSS events. Additionally, civil servants (GS 12-14) who demonstrate problem-solving know-how, and indicate a strong desire to learn LSS and make a difference, can be recruited for 1-year details in the LSS Program Office. Detailees gain exposure to a variety of areas and challenges, while learning new skills that they can share with their home organizations.

"LSS has made significant impacts on NASA Glenn's people and processes over the past 5 years," Moxley said. "Using LSS as a fact-based, data-driven approach will help the center weather a difficult budgetary environment."

Employees who want to learn more about LSS may choose to attend a LSS 4-hour White Belt program (awareness training) or one of the Lunch & Learn sessions usually presented in the Small Dining Room. They can also pursue a course at their own pace through the Learning Center.

—By S. Jenise Veris



*Top: An area in the Structural Dynamics Laboratory, prior to its transformation following LSS consultation. Above: The additional desk was excessed, files managed, and work surface cleared to create an appealing area to accommodate internal and external customers.*