



“Our Past, Our Present, Your Future: 75 Years of Exceptional Technology Achievements”

May 24, 2016- Lewis Field

Agenda is subject to change, please check back frequently.

- 7:30 - 8:30 a.m.** **Registration and Continental Breakfast**
Main Exhibit Tent (Adjacent to Hangar)
- 8:30 a.m.** **Welcome and Kickoff**
Main Exhibit Tent (Adjacent to Hangar)
- 9:00 - 10:00 a.m.** **Technology Exhibition Floor Open**
Main Exhibit Tent (Adjacent to Hangar)
- 10:00 a.m. - 12:00 p.m. Concurrent Sessions**
- Session A
 10:00 - 10:50 a.m.
- Session B
 11:00 - 11:50 a.m.
- 12:00 - 2:00 p.m.** **Luncheon Panel Discussion**
“NASA’s Journey to Mars: Science Fiction Meets Reality”
Stephen Jurczyk, Associate Administrator, NASA Space Technology Mission Directorate
Bryan Smith, Director of NASA Glenn Space Flight Systems
NASA Astronaut Captain Sunita Williams (USN)
Moderated by Betsy Kling, Chief Meteorologist, WKYC Channel 3
- 2:00 - 4:00 p.m.** **Concurrent Sessions and Tours**
- Session C
 2:00 - 2:50 p.m.
- Session D
 3:00 - 3:50 p.m.
- Facility Tours
 2:00 - 4:00 p.m.
- Speed Networking with NASA Executives
 3:00 - 4:00 p.m.
- 4:00 – 5:00 p.m.** **Networking Reception and Closing**
Main Exhibit Tent (Adjacent to Hangar)

Breakout Sessions: Please choose only one session per group

10:00 AM – 12:00 PM Concurrent Sessions

Session Group A – 10:00-10:50 a.m. (Choose only one)

❖ Environmental Impact: NASA Glenn Water Technologies

Description:

Both global water scarcity and water treatment concerns are two of the most predominant environmental issues of our time. Join us as Glenn researchers share insights on a snow sensing technique, hyper spectral imaging of Lake Erie's algal blooms and a discussion on non-equilibrium plasma applications for water purification supporting human spaceflight and terrestrial point-of-use. The panel moderator will be Bryan Stubbs, Executive Director of the Cleveland Water Alliance.

❖ ABCs - Aerospace, Biomimicry and other Cool Things

Description:

Biomimicry, one of the hottest design philosophies of the day, has revolutionized the world we live in. This talk explains why it is vital, for our economy and for the sake of technology that we learn to observe nature and borrow from its 3.8 Billion years of research and development. The myriad applications of biomimetics and the people who have adopted this philosophy are explored. From penguin-inspired supersonic transport to dragonfly-inspired Mars rovers and everything in-between, this talk will open your mind to the world of possibilities that awaits us when we open Nature's toolbox. The talk will include an overview of NASA Glenn Research Center's missions, goals, and capabilities and how biomimicry has been and will be used to achieve these goals with regional and national partnership

❖ How to do Business with NASA

Description:

NASA's office of procurement seeks to facilitate optimal business solutions while contributing to the Agency mission through the acquisition of supplies and support services. There are many opportunities to work with NASA as a prime contractor or sub-contractor. NASA has many resources to enable organizations to learn about current and future business opportunities. In this session learn about:

- NASA's acquisition forecast- what we buy and when
- Small Business Programs
- How a to get started doing business with the federal government
- Establishing contacts at NASA

Session Group B – 11:00 – 11:50 a.m. (Choose only one)

❖ An Evening with the Stars- Exclusive Replay!

Description:

A partnership between the Ohio Aerospace Institute and NASA Glenn, An Evening with the Stars (EWTS) has become a highly anticipated annual event. EWTS invites guests to celebrate and explore NASA Glenn's unique research and technology innovations through dynamic speakers and spectacular imagery featuring NASA Glenn experts. Technology Day is offering you the opportunity to experience these unique, live presentations from the 2015 event by Dr. David Manzella, In-Space Propulsion and Cryogenic Fluids Management—Solar Electric Propulsion; Dr. Brian Motil, Physical Sciences and Biomedical Technologies in Space—International Space Station Microgravity; Daniel Raible, Communications, Technology and Development—Optical Communications.

❖ Cross-Cutting and Cutting-Edge: NASA Glenn Silicon Carbide Technologies

Description:

Glenn has a robust portfolio of SiC-related technologies spanning the spectrum of semiconductor capabilities. Patented and patent-pending intellectual property (IP) ranges from wafer-level technologies through chip and sensor solutions, and include novel logic and circuitry solutions enabling systems to reliably operate at 500° C or higher. Glenn has demonstrated greater than 1000-hour life at 500° C for a variety of SiC-based electronics. In addition, Glenn has IP on high temperature static and dynamic pressure sensors, gas sensors, and other SiC-based semiconductor technologies. Glenn's SiC-based electronics could revolutionize opportunities for intelligent systems operating in high temperature environments.

❖ How to License NASA Glenn Technologies (morning session)

Description:

Glenn's world-class researchers continually develop innovations to benefit the space program. Glenn's Technology Transfer Office is tasked with helping industry benefit from these inventions by widely disseminating the technologies for scientific, academic, industrial, and commercial use. In order to protect the Government's interests, the technologies are patented, marketed, and licensed to partners for commercial applications. By negotiating a license for one of our patents, our licensees gain access to Glenn innovators and use our unique facilities to support their research and development efforts for commercializing licensed NASA technology. The Technology Transfer Office is here to help you navigate the licensing process and assist in assembling the necessary documents. In this session, you will learn how to access our patented inventions and gain rights to evaluate these technologies for compatibility with your business products.

2:00 - 4:00 PM Concurrent Sessions and Tours

Session Group C – 2:00- 2:50 p.m. (Choose only one)

❖ Cross-Cutting and Cutting-Edge: Shape Memory Alloy Technologies

Description:

NASA's Glenn Research Center invites companies to establish partnerships to investigate potential applications for Shape Memory Alloys (SMAs). SMAs are materials that can be deformed at low temperature and recover their original shape upon heating. Glenn Research Center has been working to develop new alloys that can operate up to ~300°C, compared to ~80°C for commercially available alloys. In addition, NASA has been working on supporting technologies (modeling tools, design methodologies, test standards, material supply chain, etc.) that will promote the application of shape memory alloys for adaptive structures and actuators.

❖ NASA's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs

Description:

Learn about NASA's approach to building a strong national economy and fostering small business innovation and growth. Through these programs, NASA enables small businesses to explore their technological potential and provides the incentive to profit from commercialization. By including qualified small businesses in the nation's R&D arena, high-tech innovation is stimulated and the United States gains entrepreneurial spirit as it meets its specific research and development needs.

❖ How to License Glenn Technologies (afternoon session)

Description:

Glenn's world-class researchers continually develop innovations to benefit the space program. Glenn's Technology Transfer Office is tasked with helping industry benefit from these inventions by widely disseminating the technologies for scientific, academic, industrial, and commercial use. In order to protect the Government's interests, the technologies are patented, marketed, and licensed to partners for commercial applications. By negotiating a license for one of our patents, our licensees gain access to Glenn innovators and use our unique facilities to support their research and development efforts for commercializing licensed NASA technology. The Technology Transfer Office is here to help you navigate the licensing process and assist in assembling the necessary documents. In this session, you will learn how to access our patented inventions and gain rights to evaluate these technologies for compatibility with your business products.

❖ Facility Tours (This session meets 2:00 – 4:00 PM)

Go behind-the-scenes in some of Glenn's world-class research facilities!

Register for this session and select the specific tours on May 24.

Glenn tours are a unique blend of education and entertainment. Visitors can explore America's research facilities and see where scientists and engineers develop propulsion, power and communication technologies for NASA's aeronautics and space programs. Guests will have the opportunity to tour facilities including:

Glenn Extreme Environment Rig (GEER)

GEER can create the high-temperature, high-pressure, toxic conditions found on Venus as well as other extreme environments. It can create atmospheres with accurate mixing down to the parts per billion.

Zero Gravity Research Facility

The Zero Gravity Research Facility is NASA's premier facility for ground based microgravity research, and the largest facility of its kind in the World. The Zero-G facility provides researchers with a near weightless or microgravity environment for a duration of 5.18 seconds.

Propulsion Systems Laboratory

The Propulsion Systems Laboratory is NASA's only ground-based test facility that can provide true flight simulation for experimental research on air-breathing propulsion systems.

Simulated Lunar Operations (SLOPE)

Glenn's SLOPE lab has test rigs and equipment used for studying the traction and power consumption of lunar vehicles and other machines operating in soil. Researchers at the SLOPE facility develop innovative wheels that can navigate lunar and Martian terrain so NASA can continue to explore the solar system and beyond.

Session Group D – 3:00 - 3:50 p.m. (Choose only one)

❖ Additive Manufacturing 2.0

Description:

NASA is interested in Additively Manufactured components for space and aeronautics technologies, as well as, the potential of using Additive Manufacturing techniques while in space. NASA Glenn Research Center is performing cutting edge research to develop the next set of materials and techniques for Additively Manufacturing components for propulsion, environmental controls, and extreme environmental conditions. This session will discuss why NASA GRC is interested in this technology, advances in materials, and potential commercial applications.

❖ How to Partner with NASA

Description:

RED - NASA's Regional Economic Development program, seeks to establish regional partnerships with organizations to create economic development in the private business sectors of importance to the region and the Nation. An important priority for Glenn's Technology Transfer Office is to help move technologies originally developed for use within NASA into the commercial sector to benefit society. Both RED and the Technology Transfer Office at Glenn can enter into partnership agreements, typically with reimbursable space act agreements to utilize our unique facilities and technical expertise. In these agreements, no goods or services are provided to NASA. Instead, NASA can provide data, access to facilities, services, and personnel to the paying party. In this session, you will learn how to access our on-site capabilities and receive proof-of-concept results that will allow you to improve your products or test our technologies for later licensing.

❖ Speed Networking with NASA Senior Executives (This session meets 3:00 – 4:00 PM)

Description:

Bring plenty of business cards for this fast-paced exclusive networking opportunity! Join NASA Senior Executives in research and engineering, technology and innovation, aeronautics and space flight systems to explore partnership, collaboration and business opportunities. This session will fill up fast! For registered session attendees, please limit session attendance to no more than two representatives from your organization.

❖ Technology License Agreement Signing (This session meets 3:00 – 4:00 PM)

Description:

Register for this session only if you plan to take advantage of the NASA Glenn Technology Day Licensing Promotions and same-day signing offer. For more information, see the NASA Glenn Technology Day Event Information page.